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The Designs for the London County Hall (concluded).

IN resuming our criticism on the designs for the London County Hall, we cannot but comment on the shabby, unworthy and inconvenient manner in which this remarkable collection of designs has been exhibited to the public—crowded together in two rooms of insufficient size, so that there is hardly room to see them properly, and all the spectators are in each other's way. Considering the immense amount of talent and labour which these designs represent, the County Council ought at least to have secured a large room with adequate space for them to be properly seen. There could have been no difficulty in obtaining one.

Mr. Lutyens (115) adopts a rectangular plan, setting back the centre portion of the river front; the Belvedere-road front is "stepped out" towards the centre to follow the line of road, and set back symmetrically on the other side of the centre, the public hall projecting from the main building at the north-east, and taking a circular form, which, as already observed, is bad acoustically; the exits and entrances surrounding it are well arranged. The entrance in connexion with the Council department is from Belvedere-road (though there is also access by a longer corridor route from Westminster Bridge-road); the Council Chamber is an oblong apartment on the cross axis of the building; the staircase and the rooms connected with it are well arranged both for architectural effect and for convenience, except the Division Lobbies, in which the defect of the selected plan is carried still further, for the route from their exit back to the Council Chamber is 160 ft. long, with two corners to turn. Some of the competitors, we imagine, have not realised the working of a division lobby. In other respects the plan is architecturally fine; the Westminster Bridge-road entrance leads into an octagon hall with massive piers in the centre; and the centre axis of this is continued in a corridor right along the building, parallel with the river front, crossing the large Members' Hall in front of the Council Chamber, and leading up to a similar octagon hall near the northern end of the building. The cross axis of this second hall is on the same axis as the public hall, a cross corridor leading from one to the other. All this presents the making of a very symmetrical and architecturally effective interior. Over the centre portions of these two halls rise domed cupolas which mark their position externally, and which are not useless internally for architectural effect; the main hall itself has a visible domed ceiling rising to 100 ft., and an opening in the centre gives a view of a small dome 70 ft. higher, much as we see it in St. Paul's; in fact the whole feature seems rather suggested by St. Paul's dome, even to the cone carrying the lantern. The architectural treatment is very fine and impressive, especially on the river front; a plain rusticated walling is carried up to much more than half the height of the building, making an immense base above which a comparatively small order of columns is introduced at the emphasised points of the design, the rest being plain wall face with windows inserted in it. Below the embankment are three vast arched openings to water entrances to the storage room in the cellars. Altogether a very fine and truly architectural design; the one thing which to our mind rather spoils it is the up-and-down sky line made by the high roofs. It may be "truthful" to show the roofs in this way, but it forms a line quite at variance with the monumental character and horizontal lines of the substructure.

Mr. J. B. Fulton (121) has a plan which, without showing any special opportunities for interior architectural effect, is a masterpiece of simplicity, regularity, and symmetry in the laying of rooms and coridors. He keeps the Belvedere-road front parallel with the embankment one, only with a projection in the centre; at the north-east angle the spare space of land is occupied by the Public Hall, placed parallel with the long axis of the main building instead of at right angles to it, as most of the plans show it; this gives the advantage of two connexions with the corridors of the main building, one near each extremity of the Hall. The main Council Chamber entrance, with a carriage porch, is in the centre of the Belvedere-road front and leads to a fine and monumentally treated staircase hall with a columned loggia round it, and

massive piers at the angles of the staircase, which carry a dome as a central feature on the river front. The Council Chamber is a square apartment on the cross axis of the building, with ante-rooms east and west and division lobbies north and south, the block forming an approximate Greek cross, with open courts in the angles: as in several of the other plans, the return from the division lobbies to the Council-room is a great deal too long. The arrangements for members' rooms, etc., in connexion with the Council department are convenient, though not so spacious and palatial as in some other designs. The Westminster Bridge-road entrance is of secondary importance, and does not lead into any axial corridor. There are six business entrances in the Belvedere-road front, all conveniently placed for access to rooms and staircases; the corridors are all sufficiently lighted; and for the business purposes of the building we call it a masterly plan, for clearness of route and facility of intercommunication. The two defects are that the two larger courts light not corridors but rooms, and that for this purpose they are not nearly spacious enough; they are 60 ft. wide; but though this is wide enough for the upper stories, they would be rather like wells for the offices on ground floor and basement, which would not be healthy for constant occupation. Another defect is that the lavatory blocks, which are of course for the inmates of the building, are too accessible from some of the public corridors and entrances, and might be liable to be used by those who had no right to use them. Latrines intended for an internal staff should be more decidedly cut off from the public thoroughfares. The elevations, as every one who knows Mr. Fulton's work would expect, are exceedingly fine and stately in treatment. There are two stories of very strongly marked rustication, with square-headed windows; then a story of rather lighter rustication and round headed windows, and above this is the decorative portion of the façade, supported, as in Mr. Lutyens's design, on an immense rusticated base. The decorative features consist, in the centre blocks and pavilions, of an order in coupled columns, and in the Belvedere-road front the windows of the large Committee-rooms are decoratively treated with sculpture on the spandrels, and a mezzanine circular window over. The central dome, just back from the river front, is balanced by a small cupola on each side, halfway between the centre and the ends; both dome and cupolas are well designed and of decorative outline; and unlike similar features in some other designs, are completely in scale with the remainder of the building.

Mr. Atkinson (123) has produced what is architecturally a very fine and monumental design, but in aiming at a grand effect for the Council Chamber block he has not left himself room for practical equirements. Courts 50 ft. wide with rooms looking on them will not do in a building seven or eight stories high. The treatment of the centre portion is exceedingly fine both in plan and elevation. A carriage porch behind a colonnaded screen in three bays leads to an entrance hall parallel with the long axis of the building also in three bays with domed ceilings and divided by column screens; from the right or left bays open north staircase and south staircase, landing in a vast three-bay *salle d'Attente* above the entrance hall. The whole of this centre portion, with the wide corridors, the square and the oval Committee-room at each end of the *salle d'Attente*, the long library and the Reading-room, on the north and south confines of the Council Chamber department, make a grand and sumptuous suite, but too much space is expended in securing all this palatial approach; and with all its grandeur, that point of convenience of return access from division lobby to Council Chamber is as much neglected here as in several other plans; and the offices portion of the plan looks rather cramped. The Public Hall (at the north-east angle) is finely and effectively planned in a Greek cross form, the arms of the cross being occupied by crush-room, ante-rooms (divided off by columns), and platform, the centre area forming the Hall. The Council Chamber is also in Greek cross form, with the angles of the square cut off, and the arms of the cross forming a kind of ante-rooms with columns between them and the hall; this looks very well architecturally, but whether a room thus planned, and with a domed ceiling over the centre 80 ft. to the springing and 100 ft. to the apex (with an open lantern over that) could be made a convenient room for carrying on a debate in, is more than questionable. The architectural treatment is very fine and very monumental—perhaps almost too much so; but like Mr. Flockhart's, this is a piece of architectural invention; the combinations at all events are most original; the square-cut solidly treated pavilions with their masses of rustication contrasted with the sculpturesque treatment of the interior bays; the plain unadorned mass of the end portions of what may be called the curtain-walls, contrasting with the columned order and the sculpture on each of the central pavilion, produce a most interesting and effective whole. The tower which rises over and marks the Council Chamber site is, however, too massive and too extravagant, as a piece of outlay on an extraneous feature for architectural effect merely; and its effect, even in that sense, would hardly be worth its cost.

Messrs. Warwick & Hall (113) show a plan on a very fine architectural scheme; and it may be said that a plan which makes what one may call a fine pattern on the paper generally has something to recommend it. They adopt the fan-like scheme of plan, following the expanding lines of the site. The Westminster Bridge-road end is treated as a crescent, with the members' entrance in the centre of it; and, as we have already said, this is really the place for the members' entrance, rather than round in the Belvedere-road. The Council Chamber in this plan is placed near to this south entrance, its axis on the long axis of the building. The main staircase leads to a long vestibule at right angles to the main axis. The Council-room is semicircular at the further end, with a corridor round it with doors corresponding with each aisle between the seats (a very good arrangement), and the division lobbies are properly planned, with return doors to the Council Chamber close to their exit doors. As the two outer blocks of building, forming the two long façades, expand from each other northward, they take in a large circular court with offices looking into it and a corridor round the outside; these (on the principal floor) are all "Members'-rooms," and the outside circular corridor leads to a square lobby, opening on a circular room which is the Members' Library, also with a corridor round it, from which open the Members' Smoking-room and Reading-room, on opposite sides. This is perhaps a little scattered, and some members might grumble at having to walk round a half circle to the Library instead of in a straight line; to our thinking the interest and picturesqueness of such a plan would quite outweigh this objection. And we do not see that the offices have suffered by this arrangement, except that in some portions of the plans there are too many narrow rooms with the window at one end; an arrangement always to be avoided if possible, as the inner end of the room is apt to be too dark for working. The connecting angles of corridors are expanded into small square or circular lobbies, and one of these faces each office entrance from Belvedere-road. On the whole, this plan may be said to be a very good compromise between effectiveness and convenience. For the design we feel less sympathy: it is what people call a "handsome" building, with a good deal of show and not much originality of special character. The river front is diversified with a dome (over a members' staircase in the centre), four towers or small cupolas, and four apparently leaded domes at the angles of the wings. There is a lofty campanile near the Westminster entrance end, over the grand stairs, which is the best in line of the decorative additions, and would have a fine effect. The Public Hall in this design is placed in the middle of the Belvedere-road front, parallel with the centre axis.

Mr. Hippolyte Blanc (109) also introduces a lofty campanile, placed appropriately above the architect's room at the south-west angle of the river front; and his campanile is treated in the true way—an immense plain stalk of masonry rising to a great height and crowned by a lantern and cupola. We should have liked it even better without the panel in the stalk. The author makes no attempt to symmetrize the Belvedere-road front, but brings the plan out in projection after projection as the site expands; which is indeed the way it is shown on the official sketch plan, but it is a poor way to treat a great building; a public building of first-rate importance should rule the lines of the site, and not be ruled by them. The members' entrance is by a circular porch in the centre of the Belvedere-road front, and up a staircase to a vestibule with an apse at each end; thence into the Council-room, a square with two of the angles cut off. This portion of the building is conveniently planned; the division lobby access is convenient; a two-aisled vestibule connects with the Members' library on one side of the Council-room and their Lunch and Tea-room on the other side. The corridor communication is well kept up all round; there is in fact, an excess of corridor; the two cross corridors close to each other near each end of the plan are certainly not very good planning, and we doubt if the

very long single rooms (150 ft. long) for the assistants of this and that department, are a very comfortable kind of arrangement. In short, we cannot see much to recommend the plan as a whole. The river façade, with an order of coupled columns above two stories of rusticated wall, and its two cupolas at the angles of the central blocks, is quiet and dignified. The author has an alternative design without the campanile, and with a large and finely designed dome showing in the centre, and subordinate cupolas of very graceful design, which we much prefer to those on the design with the campanile. In fact, the dome was just what the design wanted ; it is in character with the rest ; but it is carried to an immense height, and might be considered to be economically out of the question. The dome would apparently have been over the Council Chamber, but there are no walls shown on the plan such as would carry it ; probably it was an afterthought after the plan was made.

The plan by the late Mr. Mountford (107), as we regret to have to describe him, follows nearly the line of Belvedere-road on the east side, only keeping the portion next the Westminster Bridge frontage at right angles to it for some 80 ft. or so, for the sake of the architectural treatment ; and the plan follows also the oblique line of the north boundary of the site. This saves ground, but, as already observed, it is not the way to plan a great monumental building. In most other respects this is an admirable plan, clearly and symmetrically laid out in its interior lines. The main entrance for the Council is in Belvedere-road, with a carriage approach on a concave curve ; the entrance leads into a narthex of three bays, and straight on to a central staircase landing in the Council Chamber vestibule on the central long axis of the plan. The Council Chamber plan is circular with spandrel recesses (not very good for hearing), and the return to the Chamber from the division lobby exit is some 90 ft. of route—better than some plans, but too long. But in the main the plan is excellent ; perfectly simple in its lines of corridor, all of which are well lighted ; but some of the rooms look on to courts, and though these average some 100 ft. in width, the section gives warning that this is hardly sufficient ; only a small proportion of the rooms, however, are lighted from the courts. The treatment of the elevations is architecturally what may be called a one-story design ; a low basement of one story with a large order (in the emphasised portions) 40 ft. high running through two stories, and an entablature running straight through from end to end. The line is broken here and there, of course, by a pediment and *frontons*, but there is no feature rising above the roof line, and the general treatment horizontally considered, is rather flat. There would have been an expression of dignified repose about the whole design, however, and it is an economical design also.

Messrs. Gardner & Hill (114) have a fine perfectly symmetrical and rectangular plan, with a three-bay narthex vestibule towards Belvedere-road (apparently rather a favourite arrangement) leading into a fine "Council Entrance Hall" on the same floor, beneath the Council-room, with stairs opposite leading to an ante and reception hall, with a balcony access leading back again to the Council-room. This is grandiose but rather roundabout as an access ; there is a more direct access also by an east staircase evading the "Entrance Hall," which in that case ceases to be one. The Council-room is a square with the angles cut off, and with piers standing free and leaving a kind of aisle and angle recesses behind them. This kind of arrangement no doubt looks well architecturally, but these recesses are not favourable to acoustic conditions. The route from the division lobby doors back to the Council-room is about 190 ft. ! There are too many offices lighted from internal courts ; in the higher stories the courts are large enough (120 ft.) ; but in the lower stories, where the buildings encroach more on the court, they are not, though of course the widening of the courts above makes their case better than it would otherwise be. The design has a good deal of massive power about it ; the two end portions, comprehending the outer courts and their buildings, are treated as wings a little lower than the main façades ; on a rusticated basement, part of which is architecturally treated as one story (though it can hardly be so in reality), is a large order, as in Mr. Mountford's design, and there is a small cupola shown in the centre of the river front, which does not however correspond with anything that we can recognise on the plan. The outline of the cupola is agreeable, but the elevations are drawn in that tendency to the use of thick lines which has come in of late, in this case in so exaggerated a manner that it is difficult to understand what the details are meant to convey ; and on the whole this may be said to be, in the elevations, what we should call a draughtsman's design. But the plan is a fine one in many respects.

We fear we cannot regard Mr. Belcher's plan (104) as a success. It is quite symmetrically laid out in its main lines ; there is a spacious staircase with a domed ceiling, for access to the Council-room from the Belvedere-road centre entrance ; the Council-room, octagonal with four columns standing free (which would be rather in the way of some of the seats) would be a fine room ; and the library and the method of access to it, by corridors partly open to the grand staircase, are arranged in a manner both effective and convenient. But otherwise there is rather a want of backbone in the plan ; there is no apparent advantage in the double width corridors at some parts, with columns of piers down the middle ; and two rows of offices on each side of a court about 60 ft. wide and 100 ft. deep is an arrangement one cannot contemplate with serenity. In another court there are offices on one side lighted from a court only 45 ft. wide opposite the rooms, which is worse. The elevation has, as might be expected, fine qualities. There is a two-story basement with round arched openings containing a mezzanine ; then a plain story with architraved windows and segmental heads ; over this comes a large order of fluted Corinthian columns. It would have been better if the intermediate story had been rusticated as well as the basement ; as it is, the order seems to stand on the weakest portion of the substructure instead of on the strongest part. There are two campaniles, above the roof level, one on each side of the river front centre, which we have no doubt would have been worked out with admirable detail ; and there is a mighty rusticated archway in the Embankment wall, for barge entrance to the basement stores. The façades seem rather to want strengthening at the angles. Except for the campaniles, we should hardly have recognised Mr. Belcher's hand in this.

At first sight we were much taken with the symmetrical lines and arrangement of the plan by Mr. Clyde Young and Mr. Poley (103), but we fear it will not do in detail. Although their two principal internal courts are large (about 140 by 110 ft.), still the facing of habitable rooms towards internal courts is always a thing to be avoided if possible ; in this case both the courts are completely surrounded with offices ; and on the other hand, some parts of the corridors would not be well lighted. Sixty feet of corridor cannot be lighted by a side window beyond that length. The rooms subsidiary to the Council Chamber are conveniently planned ; but to put Committee-rooms away at the far angles of the building, at the furthest points from the Council Chamber and from each other, is quite a mistake. Committees may want to communicate with each other and with the Chairman, and should not be sent to the extreme corners of the building. The river elevation is a fine one, with a large dome (over the Council Chamber) and two very graceful campaniles at each angle of the centre block ; and these campanili have the merit of being in true scale with the building, and looking their real size. But if the large scale section is looked at one can hardly suppose that the authors could expect that dome to be carried out, involving all that absolutely empty and useless space above the Council-room, for mere effect. It looks well in elevation, but it is an extravagance.

Mr. Haywood (111), of Birmingham, has what in general laying out is a very good and symmetrical plan, as far as the corridor traffic is concerned, but it is somewhat spoiled by the placing of rooms lighted into too small courts (two of them only 45 ft. wide). The Council Chamber, octagonal, on the cross axis of the plan, is fairly well arranged in regard to its accessory rooms, though the Library and Reading-room is rather cramped. The corridors are for the most part well lighted The Belvedere-road front is "stepped down" on plan to follow the course of the road, and hence the Belvedere-road front, which looks symmetrical on elevation, is not so in reality. The best part of the design is the river front, which is fine and dignified in effect ; on a rather low strongly rusticated base the centre portion has a large columnar order nearly 50 ft. high, the columns standing free in front of a recessed wall, stopped at each end by a massive rusticated pavilion with a pediment ; the wings are treated with simple window openings and a smaller pavilion feature near each end. Two level masses of wall rise one behind the other above the main balustrade line ; the whole makes a

rather heavy but very monumental looking façade.

Messrs. Houston & Horn (105), of Glasgow, have an effective plan; the Belvedere-road part follows the oblique line, with a curved recess in the centre, where the main entrance leads to an elliptical staircase hall with the larger axis at right angles to the cross axis of the building, and at the top of the stairs a three-aisled vestibule leads to the Council-room. The staircase would be a fine one, and the accessory rooms to the Council Chamber are conveniently arranged (with the usual mistake as to the division lobbies); two large and fine rooms balance each other at the extremities of the Council suite (where the salient features of the architectural front come in), marked respectively "Buffet" and "Reading-room," food for the body and the mind being thus architecturally emphasised in plan and design (reminding one of Blenheim, where the kitchen balances the chapel). The centre portion of the river front is occupied by a lofty order with arches between the columns, behind which screen is the Members' Terrace; the same order is continued in the wings and on the south front. The two domes, carrying immense lanterns, are somewhat pretentious in character; and while they are drawn as octagonal domes on the elevation, there is nothing to correspond to this on the plan; the domes seem put in as an afterthought without regard to the plan. On the whole this design is more showy than really satisfactory.

Mr. T. Davison's plan (102) is very fine and symmetrically treated, with some good special points in it. There is a principal entrance from the centre of both the Belvedere-road and Westminster Bridge-road fronts, each leading direct to a circular block in the centre of the building, in which is the Council Chamber, not circular however, but occupying a little more than half the circle, the remainder of the space being occupied by the division lobbies, with a concave bay between them occupied by the chairman's platform. There is a circular members' lobby all round, with a door opposite each seating-aisle; so that after being counted into the division lobby the members have only a few steps along their circular lobby to a council-room door. This is very well managed. The corridors are all well lighted and there are hardly any rooms looking on the courts; the author has got over the difficulty partly by making the central blocks across the courts (on the long axis of the building), the one the Reception Hall, the other the Members' Library; and there being no corridor on either side, these get cross light and ventilation. This makes the Library, in a certain sense, a passage room, but it would hardly produce any practical inconvenience. There is a large dome in the centre, presumably over the Council Chamber. The river front is well treated, with four campaniles answering to the four principal cross blocks, with colossal sculpture in their bays—figures about 20 ft. high, which do not add to the scale of the building. A columnar order through two stories is introduced above the high arched basement story; the wings at the extreme ends are kept plainer and simpler, but the same main cornice runs through all. Above the columnar order is what would be called an attic, only it is below the main cornice, decorated with sculpture between the windows. There is a great deal that is pleasing in this design, but it seems rather to want decided character, and the campaniles are too large, both in actual size and in the scale of their details; the effect would have been better had they been kept lower and less prominent.

Messrs. Jemmett & McCombie's is a fine plan with some special features in it. It is a radiating plan, the outer blocks on the long sides following the expanding lines of the site. The principal entrance is from the Westminster Bridge-road, by a long three-aisled carriage entry which leads into a courtyard nearly 100 ft. square, surrounded by a cloister. There is also a carriage entrance into the courtyard from Belvedere-road, and an entrance by steps from the Embankment at the other side. On the inner (northern) side of the courtyard is the entrance hall for the Council Chamber, leading to two semicircular stairs, one on each side of the corridor; and the Council Chamber itself, an oblong room, is placed over the entrance hall. The corridors are well lighted; there are too many suites of rooms lighted from courts, which are 95 ft. wide; but in general the laying out of the plan is very good, and the manner in which stairs are distributed especially, leading off widened spaces at convenient points. The Public Hall is got in on the Westminster Bridge-road side, above the entrance and its side recesses, and has a movable platform only, so that it can be used as a lounge or crush room when not in use for assemblies. The exterior design is refined and shown in carefully executed drawings. There is a continuous two-story rusticated basement, with an order and pediments on *frontons* introduced at one or two salient points; between which a mass of wall is treated with channelled rustication in which the windows are set. Above the Council staircase is a comparatively small and graceful columned cupola, which serves to give effect to the skyline without the waste of space and material implied in the large domes introduced into some of the other designs.

Concerning the only remaining design (112), we prefer merely to remark that we cannot understand in the least how it came to be included in a selection of fifteen from which that of Messrs. Lanchester & Rickards, published in our issue of January 18, was excluded.

Speaking generally, however, the standard of plan and design in this great competition is a high one, and the various suggested methods of treating the problem form a very interesting exhibition, which we only wish had been arranged so that it could be seen better and with less inconvenience to the spectators.

CHAPEL AT CONVENT OF ST. MARY OF NAZARETH, EDGWARE.—The statement in our last issue that this church is in progress was incorrect, and we are informed that the building was dedicated some time ago.

LIBRARY AND INSTITUTE PREMISES, CILFYNYDD. A library and institute have been erected in connexion with Albion Colliery, Cilfynydd. The building, which is of native stone, dressed with Forest of Dean stones, was erected by Messrs. Smith, Jones, & Sons, the architect being Mr. J. P. Jones, Cilfynydd.

NOTES.

Nationalisation of Railways.

WHILE it is not intended to discuss this momentous question at any length in this column, it may be remarked that the arguments adduced in favour of the proposal in the House of Commons on Tuesday were very imperfect and inconclusive. If (to use the terms of the motion) State purchase is desirable, "particularly with regard to preferential treatment of foreign goods," it is a reflection upon the ability and ingenuity of legislators, who should surely be able to devise a much less drastic remedy for this old-standing grievance. If existing legislation has proved inadequate to suppress undue preference, by all means strengthen it; but the case for nationalisation of railways must have a much more convincing "leading" argument before its supporters can hope to make much headway. The President of the Board of Trade repeated his promise of a full inquiry into railway rates and administration generally, and in view of recent developments this will possibly be welcomed by some of the railway companies themselves, as well as by aggrieved traders. As to the general question, we believe that the nationalisation of railways would mean a permanent deterioration in the speed of trains and in the management of railway traffic, in which latter point this country is at present superior to any other.

Land Reclamation.

THE evidence of Sir Hugh Bell before the Coast Erosion Commission shows that in some places at least protection and reclamation works can be conducted with advantage. Since land reclamation powers were obtained by the Tees Conservancy Commission some 4,270 acres of waste and useless foreshore have been reclaimed and used as the site for extensive iron and steel works, shipbuilding yards, graving docks, electric power stations, zinc and salt works, representing a value of several million pounds. Experience in purely agricultural districts is not so happy. Thus, Mr. Alleyne, of the Norfolk Estuary Company, said that the work of reclamation had proved to be very much in excess of estimates and that it was very questionable whether the land in his district would be worth reclaiming from the commercial point of view. The enclosure per acre cost from 20*l.* to 25*l.*, and the value of the land was not more than about 25*l.* per acre. That certainly is not very encouraging, so far as concerns this particular phase of the coast erosion problem.

Party Walls.

MR. JUSTICE PARKER, in the case of Jones *v.* Pritchard, has just delivered an interesting disquisition on the law relating to party walls. The actual point, however, in dispute was plain and simple. The plaintiff built a house, and in its western wall were placed fireplaces and flues which could be utilised when another house was erected adjoining. This presently happened, and the western half of the wall was conveyed by the plaintiff to the defendant, and these two persons,

therefore, each owned one half of the wall. After a time smoke began to find its way through cracks in the plaintiff's half of the wall into his house from the defendant's fires, and the plaintiff, thereupon, claimed an injunction to restrain the nuisance. The judgment of Mr. Justice Parker was in favour of the defendant, on the ground that each wall owner was liable only for his own half of the wall, and that the cracks in the plaintiff's half should be remedied by him. The decision is, as the judge said, "a convenient one," for "by making each party responsible for his own moiety of the wall it saves him from the necessary annoyance of periodic inspections by his neighbour." It is rather a strong order for an owner of half of a party wall who does not keep such half in order to bring an action against his neighbour who has done nothing negligent or wrong.

The Right to Air. In our issue of December 7 we shortly referred to the decision in the case of Cable *v.* Bryant. The case is now fully reported, and deserves some notice, since cases respecting the right to air, as apart from light, are not of frequent occurrence. A brewery company up to January, 1905, were owners in fee of a stable bounded on one side by an open yard on to which there were two apertures, 2 ft. 9 in. long by 9 in. high, which lit and ventilated the stable. The yard was leased by them to certain lessees on a lease for thirty-four years from Christmas, 1899. In January, 1905, the brewery company sold the freehold of the stable to the plaintiff, and on August 3 in the same year the brewery company sold the freehold of the yard to the defendant, the lessees joining in the conveyance to purge their leasehold interest. In April, 1906, the defendant erected a hoarding close to the apertures in the wall of the plaintiff's stable. At first the plaintiff had brought an action claiming a prescriptive right to light and air, but that action had been discontinued, and the present action was instituted on the ground that the obstruction of the apertures was a derogation from the grant. In the first place the Court decided that the existence of the lease at the time when the grant was made to the plaintiff did not affect the question and that the grantee of the yard was under obligation not to interfere with the reasonable use of the neighbouring property, derived by grant from the same grantor. It was, however, contended that the right to air, as distinguished from light could not be granted as an easement. The learned judge, after considering the somewhat conflicting decisions on the point, came to the conclusion that there was no distinction between the acquisition of the right to light and the right to air, although the measure of interference with light and with air which would entitle a person to relief may differ considerably. The decision is of considerable importance, and other cases on the question will no doubt arise.

What is a "Site"? In a recent case in *re* Feeney, Inglis *v.* Birmingham Corporation, the question was raised what was the meaning of the word "site." A testator had bequeathed a certain sum towards the cost of erecting a picture-gallery "on a site to be provided by the Corporation." The Corporation were erecting municipal buildings, and it was proposed to erect the gallery as part of the first floor. The executors contended that this would not be a compliance with the terms of the will, as the word "site" implied a ground space, and could not be applied to include the first floor of a building. Mr. Justice Eve held that having regard to all the circumstances, the Corporation would be complying with the terms of the will in carrying out their proposal, since the intention of the testator was to supply the building as distinguished from the site, and this object would be effected.

Telephone Rates. The German Postal Authorities have announced that they intend to abolish very shortly the "unlimited" rate for all users. It is probable, therefore, that in the immediate future a measured tariff rate will be the system universally adopted. It is already adopted in Austria, in most districts of America, and to a limited extent in this country. It seems to us that this is the only equitable system, and we think that the Chambers of Commerce, who recently agitated against its introduction by the National Telephone Company, were misled by the false analogy of the season ticket system on a railway. The lowest rate per call in the new German tariff is 0·48d., and this is practically identical with the charge made by the National Telephone Company. It will be seen, therefore, that the statement which has recently been frequently quoted that telephone service could be had much more cheaply on the Continent is not correct. When the change to a tariff rate was made in Austria last year it excited great indignation amongst many users, and some of them ceased to subscribe. Notwithstanding these resignations, however, the telephone system of communication is more popular than it was before, there being a large increase in the total number of users during last year. The rapid progress being made by wireless telephony is also a satisfactory feature. It is probable that telephone communication with the Channel Islands, the Isle of Man, etc., will shortly be established by this method. At present the great cost of a submarine telephone cable is prohibitive unless a heavy "load" is assured.

Water Supply to Guardians. In the case of Chester Waterworks Company *v.* Guardians of Chester Union the Court of Appeal had to consider the position of a workhouse in relation to water supplied under certain Acts of a Water Company. By the Chester Waterworks Acts, the Company was under obligation to supply water either for domestic purposes, being paid by rate, or for other than domestic purposes, being paid by agreement, or as two justices should determine. Section 22 of the Chester Waterworks Act, 1874, however, provided that

"No person shall be entitled to require, nor shall the Company be bound to supply any dwelling-house with water (otherwise than by meter or by special agreement) when any part of such dwelling-house is used for any trade or business purposes for which water is required."

The workhouse authorities had for some time been supplied by meter by agreement, but in 1901 they claimed to be entitled to pay by rate. The Court below held that either the whole or at least part of the workhouse was used for "business purposes," and, therefore, that under sect. 22 the defendants were only entitled to a water-supply by meter or special arrangement. The Court of Appeal reversed this finding. Some of the Lord Justices intimated doubt whether guardians managing the workhouse in pursuance of their statutory duties could be said to be using the premises for business purposes, but in this case the Court held the guardians to be entitled to two separate supplies of water, one for domestic purposes, the other for non-domestic purposes provided they complied with the provisions of the Company's Acts relating to the supply of water for non-domestic purposes.

Creosoted Wood Pavement. A curious point was raised in the recent case of West *v.* Bristol Tramways Company, Ltd., in which a market gardener sued the defendant company for damages caused to his plants and shrubs by reason of the company having laid that part of the road which was used as a tramway with creosoted beech blocks, the particles, or fumes, from which, it was alleged, had caused the damage complained of. The jury had found that the creosoted blocks had caused the damage, and as there was some evidence to support this finding, the Court had not to consider the scientific possibility of damage being so caused. The Court, however, intimated that the finding was somewhat startling, and the public may be of the same opinion. If creosote on wood pavement can be so inimical to plant life, the householder has reason to feel some alarm when he sees this method of paving being adopted in proximity to his house. The legal decision turned upon the question whether the Company was protected from such an action by reason of its Parliamentary powers. The statute however only required the Company to pave with "wood paving," and as it was proved that another system of wood-paving could have been adopted, viz., that with hard Jarra wood, it was held that the statutory powers conferred upon the Company did not authorize the adoption of the particular system.

Shock Absorption in Wheeled Vehicles. In the paper read last week to the Civil and Mechanical Engineers' Society, Mr. F. C. Woollard brought forward a number of interesting facts, tracing the history of shock-absorbing devices from early times to the present day, but it can scarcely be said that he held out any strong hope that we might expect in the near future any very marked diminution of the vibratory action which is so very evident in these days of motor vehicles. The spring wheel has been tried and found wanting so far, and except for such vehicles as can be fitted with pneumatic tyres the time-honoured spring seems to be the only alternative recommended by the author. It is true that several types of "shock-absorber" are to be found on the market, but these are in reality only spring brakes

or regulators, and if they act too sharply the remedy may be worse than the malady. A good deal of the trouble which arises in mechanically-propelled vehicles might be avoided by more attention to the design, balancing, and application of the engines, thereby reducing the question of shock absorption to its proper limits.

Great Central Hotel, Marylebone.

THE Borough Council have under consideration a scheme for converting the court-yard of the Great Central Hotel, which was built after Colonel R. W. Edis's plans and designs in 1898-9, into a winter-garden, with a diversion of the existing roadway from Marylebone-road into the hotel. The open space facing the hotel on that, the south, side would at the same time be preserved, in compliance with the Great Central Railway Company's Act of 1893 and earlier legislation affecting the main road and its frontages, whilst being utilised for a new approach road extending between Harewood-avenue and Great Central-street.

The Proposed Art and Drawing Congress.

WE welcome the proposal for the International Congress to be held in London in August to promote the development of drawing and art-teaching in this country. The main objects of the Congress were well put before the public by Professor Beresford Pite at the meeting at the Mansion House on Wednesday to introduce the subject. The teaching of drawing is still optional in most of our schools, although it is one of the most powerful influences in the training both of hand, eye, and mind. The Congress will probably have some effect in arousing public attention in England to the importance of the subject. The International exhibition of drawing and of Art and Craft work will be an interesting addition to the Congress.

Sketches at Oxford and Cambridge.

THE buildings at the two ancient University Towns form subjects of almost unending interest to the architectural sketcher. Those of Oxford received ample and excellent illustration a good many years ago from Mr. Fulleylove, who in this sense has almost made Oxford his own; Cambridge has not, as far as we know, received any equally adequate illustration. Mr. Hanslip Fletcher is exhibiting at the Goupil Gallery a collection of architectural sketches chiefly of Oxford and Cambridge, mostly in rather a slight and free style, but very good as examples of architectural sketching, and interesting as bringing together a number of illustrations of Oxford and Cambridge architecture for comparative study. There are also sketches of Chartres, Canterbury, and Westminster—some of these being larger and more important drawings; and some illustrations of old London buildings of historical or architectural interest.

Press Criticisms on the County Hall Design.

THE selection of a design for the County Hall has been followed by outcries from writers and correspondents in the daily papers (as frequently happens in this country), pouring contempt on the design and on the judgment of the eminent assessors. Some of the letters of this kind that have been published are obviously by people who cannot even understand an elevation drawing or realise what it intended to show or how it will look when erected; and who, judging the design by their own ineptitude, do not scruple to hint at favouritism on the part of the assessors; a suggestion which is preposterous. We do not think that we should have selected that design out of the competition, though we should have put it among the three or four best; but it has been fairly selected by good judges; Mr. Knott has honestly won his success, and we shall support no suggestion to the contrary. We should like to quote a sentence in a letter which we have received from a well-known and very eminent architect, who is among the unsuccessful competitors:—"I am defeated in my struggle to evolve a practical and direct plan, but unhesitatingly express my appreciation of the ingenuity and architectural dignity of the plan by Mr. Ralph Knott; I congratulate him and wish him good luck": a remark honourable both to the successful architect and to the writer of the letter.

THE AQUEDUCTS OF ANCIENT ROME.—VI.

By Dr. Ashby, Director of the British School at Rome.

THE valley through which the road from Ponte Lucano to Zagarolo runs (the Valle Inversa) is not deep enough to show traces of either the Marcia or the Anio Vetus; and they are not to be found again until after they have crossed the Via Praenestina near the seventeenth mile. The line of these two aqueducts is not quite correctly marked in *Papers, cit.* i., map iv.; as a fact, all the four aqueducts cross the Fosso dell' Acqua Nera a little way south of the Via Praenestina. The Anio Novus and the Claudia, being at a higher level, travel side by side, each upon a separate bridge—though the Staff Map applies the name Ponte Diruto to the whole group. It is this which Fabretti, in the map already cited, calls the last remains of the aqueduct visible towards Rome—with what little justification we shall see in the sequel. The upper bridge, belonging to the Anio Novus, is 83·95 metres in length, and the greatest height is 9·90 metres. It is a massive structure in concrete (Fig. 17 (*Plate*) is a view from the south-east) faced with *opus reticulatum*, brickwork, and *opus mixtum*, and showing traces of various successive restorations, which have concealed the original structure in *opus quadratum* almost entirely, and made it into an almost solid wall, supported by projecting buttresses; the stream is let through a very small aperture, and is held up above the bridge, so that it drops about 4 metres at this opening. The channel of the aqueduct is 1·22 metre wide, and the deposit foul.

The bridge of the Claudia is just below—the two were, indeed, connected by arches running from the buttresses of the upper bridge to the exterior of the lower channel, which were 6·24 metres in span. This bridge was originally constructed of very fine brickwork, with two concentric rings of voussoirs, resembling that of the Arcus Neroniani, which branch off from the Porta Maggiore to supply the Palatine. Its thickness was originally 3·50 metres; but it has later on been strengthened by massive buttresses—solid, except for a small arch passing right through the aqueduct. The channel is 1·19 metre wide, and contains very crumbly deposit—possibly from a flood of the Anio, or from a diversion of the water of the other aqueduct close by, the level of which is only 3 ft. or 4 ft. above it.

Fig. 18 shows a view, from the north-west, of the portion on the south-west bank of the stream, the rest being more or less in ruins. About 300 metres lower down the substruction of another aqueduct—the Marcia, no doubt—is traceable running across the valley, which here opens out considerably, just above the ground level; and a little more than the same distance further we find a considerable amount of deposit, which may fairly be attributed to the Anio Vetus; and on the hill beyond is a *cippus*, the top of which is damaged, but which in width and thickness corresponds to the others we have noticed. The aqueducts here, as at other points, are followed by a road, which no doubt served for access to them and for the transport of materials; this special road does not (except in the immediate neighbourhood of Rome) appear to have been constructed except at points where no pre-existing road afforded a convenient means of approach.

The next stream is quite a small one, being a minor branch of the Acqua Nera, which it joins just to the south of the Via Praenestina; there are, however, remains of a bridge, in concrete, on each side of the line of the road, attributable to the Marcia and Anio Vetus respectively; the other two aqueducts seem to have tunnelled, as the ground rises somewhat rapidly towards the south, and heaps of deposit may be seen upon the intervening hills.

The next valley is quite a shallow one, but in the following one, that of the main branch of the Fosso di Biserano, we again meet all the four aqueducts. The Anio Novus, the uppermost, crosses it by a single-arched bridge, which has undergone several restorations, so that its total width at the base is 10·40 metres, not including a brick buttress which projects 4·60 metres more; the actual bridge, with its base of masonry and superstructure of concrete, is 4·60 metres wide only, the rest of the base being merely a protection against the action of the stream.

The channel (there is only one to be seen), is 1·20 metre wide, and has a pointed roof of two tiles inclined towards one another; its walls are 1·15 metre thick. At each side of the bridge it can be seen entering the rock; where it travels in tunnel it has the same breadth, but is round-topped; at the east end of the bridge there has been a sluice to let off superfluous water. One hundred and fifty yards further down-stream are two small bridges: the upper is shown in Fig. 19. The arch has a span of 3·50 metres, and is curiously flattened, being only 1·20 metre high from spring to crown, so as to enable it to span the stream at a low level—for the total height of the bridge is only 3 metres. The width of the bridge is 2·90 metres. It is entirely constructed in masonry, which in the piers is rusticated; just above the arch are flat slabs projecting so as to form a cornice. If, therefore, the bridge carried an aqueduct—of which no traces now remain—it must have been in a stone channel. Six metres down-stream is another bridge constructed of concrete, faced with masonry which is not rusticated; the arch, too, is entirely of blocks of stone. It is smaller and more circular (Fig. 20), being only 2·90 metres in span, and 2·00 metres high from spring to crown; the bridge, on the other hand, is both wider (4·40 metres) and higher than the other, and has traces of a *specus* in concrete. Whether these two bridges are to be assigned to the Claudia and Marcia is somewhat uncertain, though probable; in that case we must suppose—and there is nothing unreasonable in the supposition—that the Claudia was at this point falling more rapidly than the Anio Novus; and we shall find the state of the case the same at the Laghetto.

Sixty yards further down-stream is the north-eastern pier of another bridge 3·55 metres in width; seven courses of masonry are preserved, giving a total height of 5·10 metres. There are remains of the *opus*

reticulatum of the superstructure, and a few fragments of dirty deposit, which should belong to the Anio Vetus. Of the arch itself, and of the pier on the opposite bank, no traces are to be seen. Above this bridge, on the north-east, on the Colle di Quadraversa, are a pair of *cippi* of peperino 4·60 metres apart from back to back, each 0·25 metre thick.

Close to them, but on a different line, are four small shafts of considerable depth, at intervals of 38·30, 39·00, and 41·50 metres, and at about double the distance away there is another, cut in the rock, about 1 metre square. The mouths of these are faced with rough concrete, and without exploring them it is impossible to tell their age; but in all probability they belong to one of the aqueducts, perhaps the Marcia, if the *cippi* belonged to the Anio Vetus. It is curious, however, that there is no deposit to be seen. The western branch of the Fosso di Biserano is insignificant, and none of the aqueducts appear in it.

The Anio Novus went absolutely straight on, south-westwards, its constructors not making any attempt to avoid the hard lava (selce) which begins to make its appearance. Its channel was used in later days by a branch aqueduct of the Felice, now abandoned; and it can be seen crossing the next valley (that of the Fosso di Pallavicina), the level of which has apparently sunk and broken its channel open, and continuing in the same direction. The Claudia and Marcia, on the other hand, turned, to judge from the amount of deposit, slightly to the north-west, and then ran back again south-westwards; a shaft of one of them existed immediately to the north of the so-called Laghetto—a deep indentation in the hill in the shape of a horseshoe, which may have been a quarry for selce—and at its mouth remains of both of these aqueducts may be seen. The Claudia apparently passed to the north of the Marcia, the bridge of which (the concrete foundations are, however, alone preserved) seems to have run at a slightly lower level. Of the Claudia,* on the other hand, we have a piece of the total length of 79·35 metres, constructed of brickwork; the channel was 1·20 wide for a depth of 2·90 metres, after which it narrows to 0·88 metre at the bottom, the total depth being no less than 3·45 metres; and it seems to have been open—as was *perhaps* the Anio Vetus on the Ponte Taulella. The walls of the channel are 0·85 metre thick, and the whole construction is supported by buttresses 1·05 metre wide, projecting from 1·85 to 2·10 metres, at an average interval of some 6 metres. The arch which carried the aqueduct over the stream has fallen, but the channel, with its buttresses, is still hanging in mid-air.

The Anio Vetus seems to have turned almost due north, and to have followed for some way the west bank of the Fosso di Biserano. A shaft nearly 10 metres in depth here may perhaps belong to it, but, again, requires exploration; and after this point despite repeated search, I have not been able to find any further traces of it until the neighbourhood of the springs of the Acqua Felice, north of Monte Falcone, is reached. At this point we find it once more; the rock hereabouts being hard selce, it pursues a devious course, and runs right round the end of a northerly spur of Monte Falcone, and then along its western slopes; the aqueduct follows the 105-metre contour all the way round, running just above ground level, and is of concrete faced with *opus reticulatum*, with stone quoins; a few *cippi*, too, may still be seen *in situ*; so that this is a part of Augustus's reconstruction of the aqueduct. The other three aqueducts, on the other hand, tunnel through the selce, and travel south of Monte Falcone. Of the Anio Novus we have already spoken. Of the Claudia there is a long piece of substruction, with a very sharp turn in it, apparently due to a divergence from the original line, which was then blocked up and abandoned, and may be seen close by. It lies to the south-west of the Casale della Pallavicina, and was broken through recently by a farm road—the news of which discovery was the first thing that directed our attention to the possibility of recovering the course of the aqueducts in this district.

A channel at a slightly lower level (probably, therefore, the Marcia) comes out clearly, running just at ground level, on the east bank of the stream which runs due northward from the east side of Monte Falcone. South of Monte Falcone the aqueducts turn southwards, in order to avoid a valley before continuing their westward course. Traces of them—insignificant from the architectural point of view, but none the less important to the topographer—may be observed at fairly frequent intervals, and will be found indicated in the maps to *Papers, cit.* i.

* The statement in *Class. Rev.* 1900, 326, should be corrected.

THE ARCHITECTURAL ASSOCIATION.

AN ordinary general meeting of the Architectural Association was held on Friday last week at No. 18, Tufton-street, Westminster, S.W., Mr. Walter Cave, President, in the chair. Mr. Maurice Webb, Hon. Secretary, having read the minutes of the last meeting, which were read and confirmed, Mr. C. Wontner Smith, Hon. Secretary, announced that a Camera and Sketching Club meeting will be held on February 19, when a paper by Professor Beresford Pite will be read on "Domed Churches." He also announced that an Architectural Association play, entitled "Metopemania," will be held at the Georgian Hall, Gaiety Restaurant, on Wednesday, February 26, Thursday, February 27, and Friday (members' smoker), February 28, at 8.30 p.m. Tickets may be obtained at the office of the Association.

The Late Mr. Mountford.

The President said it was his sad task to inform them that the Association had lost that day one of its most distinguished past-Presidents. He had just received the news that Mr. E. W. Mountford died that morning. The deceased was President of the Association in 1893, and his career ever since that date had been one of great distinction and had brought considerable honour upon the Association. He was sure he would be expressing the wish of all of them in proposing that a vote of condolence be passed and sent to Mr. Mountford's widow.

The motion was agreed to in silence.

New Members.

The President then announced that the following gentlemen had been elected members—*i.e.*, Messrs. E. S. A. Baynes, G. S. Cockrill, G. D. Stanford, L. Burton, C. H. Lay, and A. T. Hardman. He also announced the reinstatement of Mr. A. E. Chasemore and Mr. A. E. Nightingale.

Donations to Building Fund.

He announced the following donations to the Building Fund:—Students' Dance Committee, 6*l.* 6s.; A. E. Hughes, 2*l.* 2s.

The New County Hall.

The President said he had great pleasure in calling attention to the fact that a member, and a young member, of the Association—Mr. Ralph Knott—had been successful in the London County Council Hall competition. Mr. Knott, who joined the Association in 1898, received the Silver Medal in 1900, and was first in the School of Design in the years 1898-99. They would all wish him every success in the important work which he (the speaker) hoped he was about to undertake.

The President's announcement was received with considerable applause.

Garages and Motor Houses.

Mr. C. Harrison Townsend then read the following paper on "Garages and Motor Houses":—

"With an industry that ran its first course on the Continent, and more particularly in France, while we in England, hampered for one thing by legislative restrictions, followed but slowly after, it might well be expected that many of its technical terms would be, as is indeed the case, in the language of the initiating and developing country. Thus, we find that we talk of the 'chassis' of an automobile or motor-car, by which are implied the frame, the motor, the wheels and the steering gear; and, for the home of the car, we very largely use the French word 'garage,' alternatively with what I think the more desirable English equivalent of 'motor-house.' Of these two terms I have, for the purposes of this paper, taken the former as meaning either a public storing-place for automobiles,—or if not public, at all events, one on a large scale—and the latter term it will be convenient to consider as defining a house where a private owner keeps one or two cars for his own individual use.

It is a commonplace that an architect's first consideration should be to provide himself with the data of his problem, and then to bring to bear upon them his own inventiveness, backed, where possible, by knowledge of what others have done in the face of similar conditions. In our present case, then, dealing as we are with the housing of an automobile, the length, breadth and height of the latter are the all-determining factors. Here we are, and are likely to be for a year or two, in a not very assured state of certainty. The height of car, and the breadth of its wheels, chassis, and body have, indeed, showed little change since the early days of their manufacture, and do not, in most makes, differ very widely. As regards the length, however, matters are not so simple, and two things have to be considered. In the first place, it is, undoubtedly, the tendency of the man who invests in his first car (for the first is never the last) to 'begin small,' and to be satisfied with one which is less expensive, more humble, and smaller than its successor; and, secondly, the disposition on the part of makers has been, year by year, towards increased length. Indeed, I know of one garage where the lift has had to be

Type.		Wheel Base.	Length.	Width.	Height.
		Ft. in.	Ft. in.	Ft. in.	Ft. in.
14-16	Side entrance	8 4	12 6	5 2	5 3
,,	,, with hood up	8 4	12 6	5 2	7 5
,,	,, with hood folded	8 4	13 6	5 2	5 6
,,	Single landaulet	9 0	13 0	5 2	7 0
,,	Limousine	9 0	13 0	5 2	7 0
,,	City carriage	6 10	10 8	5 5	7 4
16-20	Side entrance	9 0	13 0	5 3	5 5
,,	,, with hood up	9 0	13 0	5 3	7 7
,,	,, with hood folded	9 0	14 0	5 3	5 8
,,	Seven-seater side entrance	9 9	13 10	5 3	5 5
,,	Three-quarter landaulet	9 9	13 10	5 3	7 7
,,	Limousine	9 9	13 10	5 3	7 7
26-30	Side entrance	9 3	13 4	5 7	5 5
,,	,, with hood up	9 3	13 4	5 7	7 7
,,	,, with hood folded	9 3	14 4	5 7	5 8
,,	Three-quarter landaulet	10 0	14 1	5 5	7 8
,,	Limousine	10 0	14 1	5 7	7 8
40-h.p.	Side entrance	9 8	13 8	6 0	5 6
,,	,, with hood up	9 8	13 8	6 0	7 8
,,	,, with hood folded	9 8	14 8	6 0	5 9
,,	Seven-seater side entrance	10 4	14 4	6 0	5 6
,,	Three-quarter landaulet	10 4	14 4	6 0	7 8
,,	Limousine	10 4	14 4	6 0	7 8

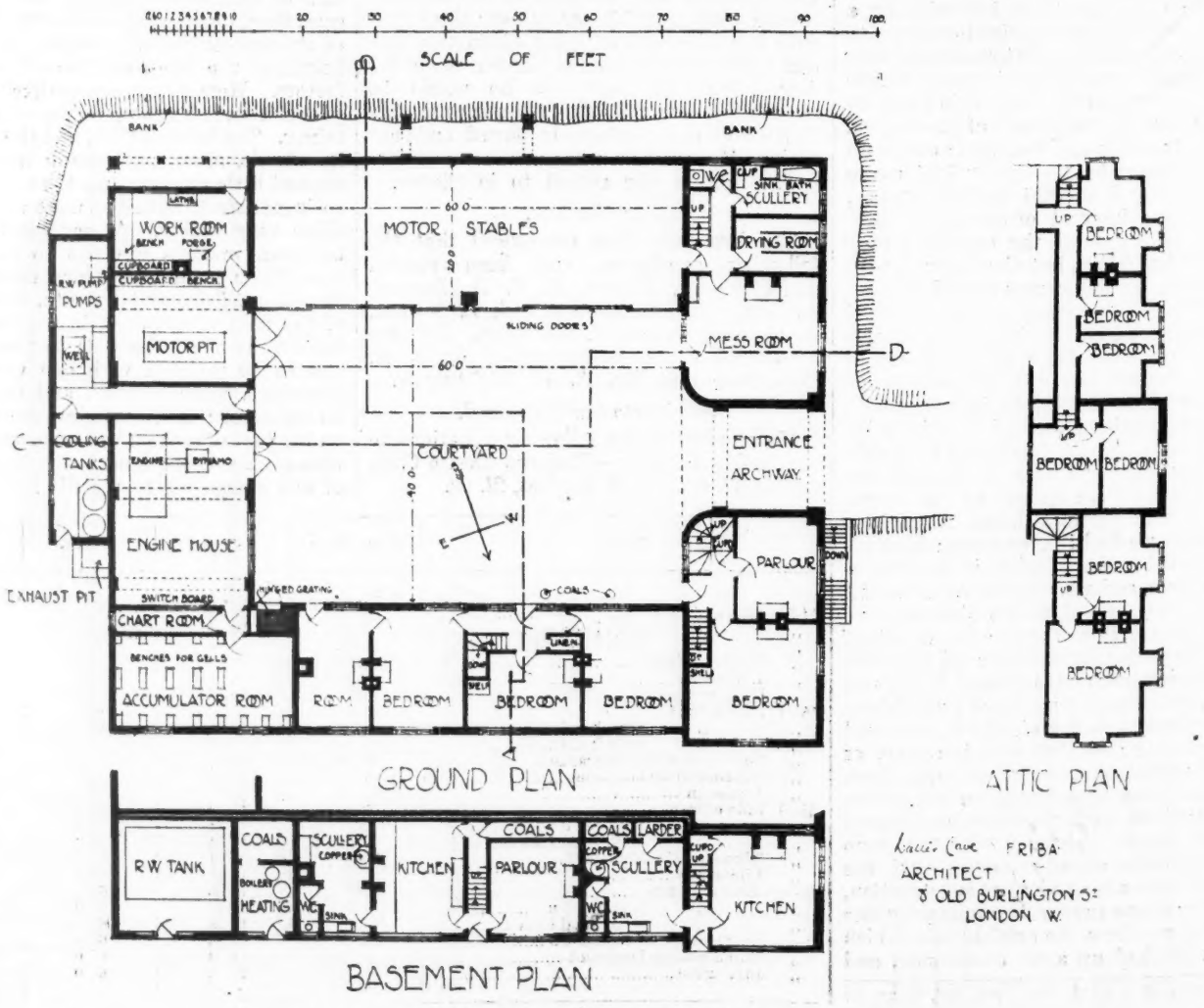
N.B.—In some cases the head-lamps mean a further increase in length.

lengthened (not widened, though) twice already in the few years since the place was built. It is on the whole, therefore, better to err on the maximum side, and, with regard to a private client, to build for the cars he *may* have later on, rather than for that he possesses to-day. The table (page 175), prepared by one of the largest manufacturers, gives the dimensions for the different kinds of vehicles of their make.

Other makers, however, vary from these dimensions, which I only offer as approximate. With respect to height, again, very often the car has to go into its house with the hood or luggage-rail fixed, and perhaps a spare tyre or two on its roof. For this a height of 9 ft. should be allowed. Then as to length, inasmuch as cars occasionally run up to (perhaps exceed, but this I do not know from actual measurement) as much as 18 ft., it would be well, as I have said, to allow generously in respect of length. Cars 16 ft. long are by no means unusual, and I should recommend that this be taken as a datum, though I admit it is a full figure and a counsel of perfection.

For giving the car proper attention—oiling, cleaning, and slight repairs—space should be arranged between it and the walls at each side and at each end. This should be at least 2 ft. 6 in. where a pit is provided, but if the latter does not exist, and the car is raised for underwork, the space should be 3 ft. or 3 ft. 3 in. Of course, in the case of several cars standing side by side, there need only be 2 ft. 6 in. or 3 ft. between them. So

Garage, Ewelme Down, Wallingford. Mr. Walter Cave, Architect.



Garage, Ewelme Down, Wallingford.

far, then, we have reached the internal size of a one-car house 16 ft. + 2 ft. 6 in. or 3 ft. 3 in. +2 ft. 6 in. or 3 ft. 3 in. = 21 ft. or 22 ft. 6 in. for the length, and 6 ft. + 2 ft. 6 in. or 3 ft. 3 in. + 2 ft. 6 in. or 3 ft. 3 in. = 11 ft. or 12 ft. 6 in. as the width. Mr. Voysey in his Higham plan has a width of 12 ft., and a length of 14 ft., which would be suitable for such a car as a 14-16 Town Limousine about 10 ft. 6 in. or 10 ft. 9 in. in length.

The height of the doors should be sufficient, I have already pointed out, to pass in a car with hood up, *plus* its luggage-rail, and, possibly, tyres on the roof, or, say, 9 ft. They should be at least 8 ft. wide in the clear, and may be either steel revolving-shutters, as in Messrs. Collcutt & Hamp's motor-house at Boscombe, and in two or three examples we shall see later, or they may be hinged—opening outwards, of course—and preferably under a pent-roof, as in the small house at Rosemont in Pennsylvania. Finally, sliding-doors may be employed—sometimes the most difficult arrangement to provide for.

For the motor-house for one or two cars not much height is required to the roof-plate, and 8 ft. will be found a good minimum to start from. Mr. Lutyen's motor-house illustrates, however, a design where a lower height than this has been well arranged. Some of the smaller houses of which I show drawings follow this dimension; notably Mr. A. N. Prentice's at Mill House, Rudgwick, where the plate height is 8 ft. from the floor, while the ceiling is 9 ft. 3 in. Mr. Wm. A. Bates, of New York, lends me a plan of a garage the height of the ceiling of which is within the figures I have mentioned, being 8 ft. 6 in., the door being the same height.

The walls should either be faced—at all events, to a height of about 4 ft. from the ground—with glazed bricks, or lined with tiles or such other material as is non-absorbent, and can be easily washed down. They should have a coved brick or tile at their junction with the floor, to avoid the harbouring of grease and dirt. All angles to recesses—such as that for the hydrant or the radiators—should be rounded, and there should be as few projecting features as possible. Just above the floor-level in each external wall should be inserted air-gratings. They should, where possible, be placed behind the radiators referred to later on. The gas resulting from the evaporation of petrol-spirit being heavier than the air the getting rid of it presents a problem all the more difficult as no principle based on upright extraction-shafts can be of any avail. I by no means agree with Sir D. Salomons, in his 'Badminton Library' volume that 'the ventilation of a motor-car house is almost unnecessary.'

As regards the floor, I find that in by far the larger number of the garages and motor houses I have seen this is cement laid to a smooth finish and to falls. I do not, however, think this a very efficient material. The action of the dropped oil on its surface tends to rot and 'take the virtue' out of the cement, and granolithic, with its large proportion of stone chips, distinctly offers less opportunity for this. Stone flags, laid not on a concrete bed but on sleeper walls for the advantage of the air-space beneath thus obtained, have been used by Sir D. Salomons, but they seem to add still further to the risk of the dangerous sparks that may result from the car coming in or going out with a chain or stud anti-skid appliance fixed on the tyres. Again, unless the space beneath is of considerable size—a cellar, in fact—there would be the danger of its forming a chamber where explosive gas could collect as the result of leakage. Some of the new floor compositions, of which so many are being placed on the market, may solve the question. Indeed, I am assured by the maker of one of these that it has successfully stood the test of daily and hard usage in a London garage of some size. A sample of another material, however, on which I experimented, after being soaked in spirit for two or three weeks, showed distinct signs of softening under the immersion.

The drains should where possible not be underground pipes, but open, half-round channels to avoid the danger of their becoming charged with explosive gas from leakages, and to allow the lubricating oil, which is apt to drop from a standing car, to be kept from the rubber tyres, upon which it has a highly injurious effect.

The majority of the plans I show to-night make provision in the house for an inspection-pit. But in dealing with automobiles we ought to recognise that we are throughout in an evolutionary stage, and that on cause shown the principle that seemed admirable and efficient yesterday, may well be discarded for something else to-day. It is so, in particular, with regard to the pit, the necessity for which no longer exists in the same measure as a few years back, and with which there is, therefore, a growing tendency to dispense. As Mr. Max Pemberton says, 'Modern cars seem designed for the special purpose of abolishing this old abyss. The best cars are wonderfully accessible. You get at your clutch by lifting a footboard; you glance at your big ends by opening an inspection-plate; you release a spring clip and the lid of the gear-box is to be lifted off; boards raised from the floor of the tonneau permit you to get at the rear-brake and the differential.' Thus much of the work which used to be done below the car can now be put in hand from above, though there still remains a distinct necessity for seeing to the underside of the chassis. My slide shows an elevation and plan of a 14-16 horse-power car, where the letter A indicates the parts which should receive daily attention in the way of lubrication, while B indicates weekly and C monthly attention, for a car running about 100 miles a day. For those who dispense with the pit there are various substitutes in the direction of jacks—either the turntable jack with three castor wheels, which is placed under one end of the car and allows it to be moved in any direction, or the larger and more efficient 'motor-car elevator.' This is a frame adjustable to the width of wheels, and hung on a see-saw principle. It is tilted down at one end, and the car when run on to it, reveals to the repairer, at a height of about 4 ft. from the ground, the lower side of the chassis.

In cases where it is incumbent to make use of the pit, the best size for this is 6 ft. by 3 ft. by 4 ft. 6 in. or 4 ft. 9 in. deep. Its sides should be lined either with glazed bricks or tiles, and it will be found convenient to form in them a recess on each side in which the chauffeur when at work can place his tools from time to time. Access to it is gained by wooden steps, as with iron ones there is always the danger of a heavily-nailed boot causing a spark. At Messrs. Tillings' premises the architects have made the pit 10 ft. long, with 2 ft. 6 in. inside width and 5 ft. deep. It has a central channel draining into a sump-hole at one end. It is all but useless to attempt to ventilate the bottom of the pit, for, as I have said, no up-cast shafts avail with a gas which is heavier than air. Messrs. George & Yeates have in the plan I show ventilated a pit (5 ft. 6 in. by 3 ft. and 4 ft. deep) by a vent flue taken from the bottom of it, and carried up a chimney shaft alongside other flues. The full plans of this design are hanging in the room. An American expert strongly advocates the extension of the pit beyond the outer wall of the garage, as, at all events, tending towards a certain amount of ventilation and as giving means of escape for the chauffeur, who would otherwise be shut up in a trap in case of fire. The covering of the pit should be a series of wide cover-boards 2 in. thick, with a cut-out lifter to each. They rest on the rebated edge of a 7 in. by 3 in. oak curb laid on the pit side. In one American example the cover is of metal, dished to serve as a drip-pan. Occasionally guide-rails are placed on either side of the pit to ensure the car's getting into position, and to prevent its wheels from a possible slip into the opening. This, however, I think has more disadvantages than gain. The floor of the pit should be dished to a grated sump in one corner. It will be found well to lay on the floor coarse sand which should be constantly removed when impregnated and foul, and of course the proprietor will see to a liberal provision of drip-pans. In public or large garages the pit—as we shall see later—is usually of continuous length, so that several cars may be attended to at once. This only increases the risk of the gathering of foul air, and I know of more than one of these large openings as to which I am quite apprehensive of an accident some day. The pit should be provided with a special electric lamp for examining the underside of the car with minuteness. That usually employed for inspecting the inside of casks will be found very useful for this purpose. There is also, when electricity is not available, a benzine safety lamp which can be used with all security.

It is not of great use placing a skylight, as is sometimes done, above the pit, since the car, when standing over the latter, naturally blocks out the light. A long low window quite near the floor is a better arrangement by far, and can be made also to help in the ventilation so desirable. The pit designed by Sir D. Salomons, of which he publishes the plans I have already mentioned, is no less than 8 ft. deep, being in fact a portion of the basement extending under the garage. This arrangement is open to the objection that trestles are a necessity to raise the worker to his proper height, the manœuvring of which in a narrow space is awkward.

A garage should be of fireproof construction, the roof no less than its other portions. In small and inexpensive buildings this is not always possible, but even then it is very desirable either to cover all exposed timbers with some such fire-resistant material as 'Uralite.'

Exterior to the motor-house proper a covered washing space should be provided, to allow of thorough washing down, whatever the weather may be. If the open sides of this are high enough, the glass roof—not a very satisfactory feature in design—is not a necessity. Indeed, in hot and sunny weather it is found objectionable, and in any case it should be, and the skylight also, of wired rough plate-glass. In the floor of this covered space is sometimes placed the pit, as in the design published by Mr. Keymes Purchase, but this position is open to the objection that, exposed as the car would be, the cold on a hard winter's day would expose the water-jacket of the engine to the danger of freezing, and would be rather hard on the chauffeur at work in the open for two or three hours.

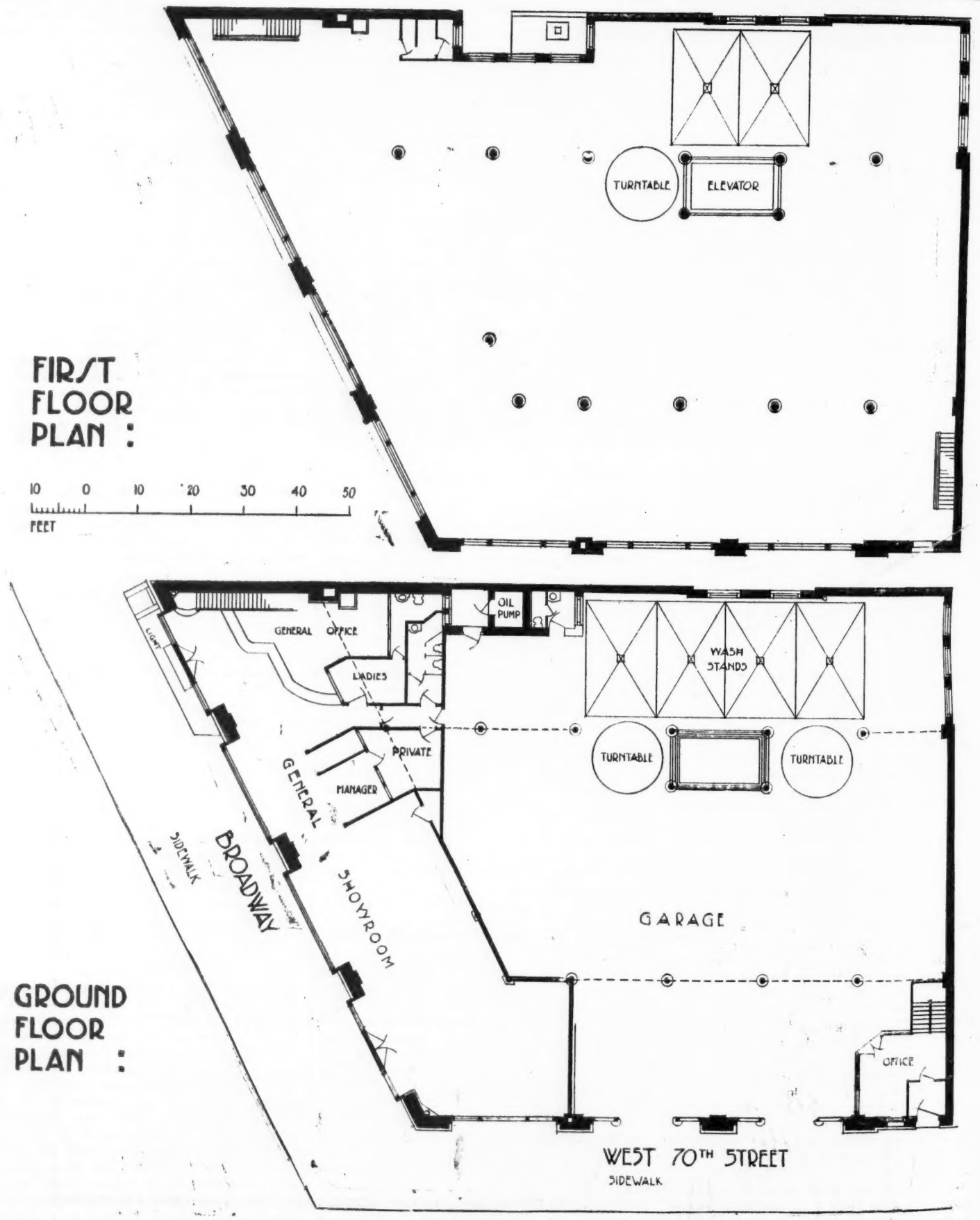
The petrol store is a highly important feature of the garage. Petrol spirit, or petrol, is an extremely volatile spirit, with a specific gravity of 680 deg., and though its vapour when mixed with eight or ten times its volume of air, forms simply a rich gas, which will burn without exploding, a larger proportion of air, about 17 or 20 to 1, forms a most explosive mixture. A naked light brought in contact with this gas has disastrous results, and the main object in arranging the place where the petrol is kept should be to avoid the chance of such a risk. The subject is considered of so much importance in the city of New York, for instance, that very stringent and carefully considered conditions are prescribed in the garage regulations of the admirably-administered Fire Department of that city. There every automobile as well as garage, small or large, is under the supervision of that authority, subject to a yearly licence. In London the Public Control Department of the London County Council is responsible

for the arrangement of garages, from the particular point of view of danger from explosion, and though the Department does not lay down a schedule of conditions in printed form as is done by the New York authority, I find that, as a matter of practice, many of the requirements insisted on in each individual case are on the same lines as the American ones.

In view of the fact that we in England (under the Regulations laid down by the Secretary of State) can store, in one place and in approved safety cans, as much as 60 gallons of volatile inflammable liquid, while in New York the maximum is limited to 10 gallons, the use of the underground storage tank is much more common, even for small garages, in the latter place than with us. There they are, moreover, limited by regulation to a maximum of 1,375 gallons of tank storage, while the amount with us is unlimited, but the licence to keep it is dependent on the London County Council Department being satisfied on the point of efficient security. In England the spirit, if only in the tank of an automobile, does not bring the premises in which the latter is placed under inspection of the authorities. In case of a small garage it would be kept in 2-gallon cans, the store for which should, wherever possible, be at least 20 ft. away from any other building, and should be of fireproof materials, with iron door and its walls provided with ventilators having gauze protection. The floor of concrete, floated with cement, should be sunk below the ground level, and the door should have a raised sill, and the sunk space filled with sand. The cans should be close to the doors in order that they may be easily accessible, and that the chauffeur need never stand inside.

Under the Secretary of State's Regulations (Locomotives on Highways Act, 1896) there are three cases in which a licence, accompanied by restrictions which affect the architect, is necessary, *viz.* :—

1. Where it is intended to sell spirit;
2. Where the storehouse forms part of, or is attached to another building, and the intervening floor or partition is inflammable



Winton Garage, New York. Mr. Chas. A. Rich, Architect.

or has an opening in it, and it is intended to use such building as a dwelling-house ; and

3. Where more than 60 gallons of spirit are to be kept.

It is not necessary to take out a licence if the storehouse is within 20 ft. of a building, but only to give notice. If, however, on one of the grounds just mentioned, a licence may have been obtained, this regulation as to distance will not apply. It is obvious that in London there are few cases where spirit can be stored for use without notice to the authorities.

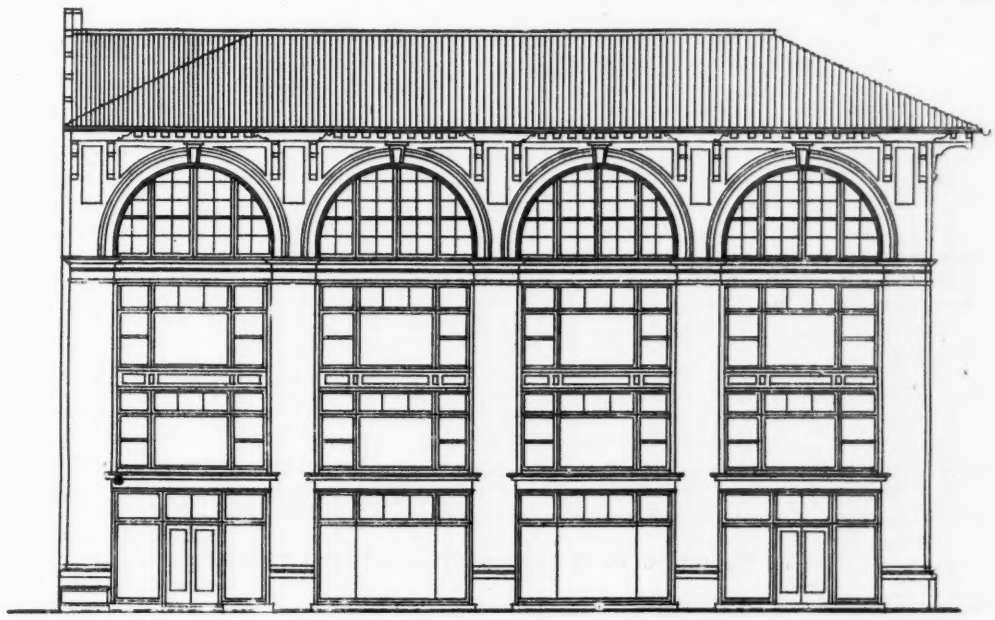
The latest version of these Regulations which became operative on August 15 last, should be carefully studied, even by those who keep but a small reserve of spirit. Perhaps the most notable restriction is that prohibiting the escape of the smallest quantity of spirit into a sewer or drain. Carelessness in this matter adds another great danger to those already faced by the sewer-man. Only a few weeks ago, in proceedings against a chauffeur for such an offence, Mr. E. S. D. Carter, on behalf of the London County Council, referred to a recent instance where there was an explosion in the sewer at some distance from the drain into which petrol ran, and much damage done.*

The private owner who keeps a small store in his garden has to remember that if his petrol store is close to his boundary, and the adjacent owner chooses to put up an inflammable building, or even a hay-stack, within 20 ft. of the store, the obligation is on the garage-owner to give notice to the local authority (in London the London County Council) of his so keeping spirit, which brings the premises under the necessary supervision.

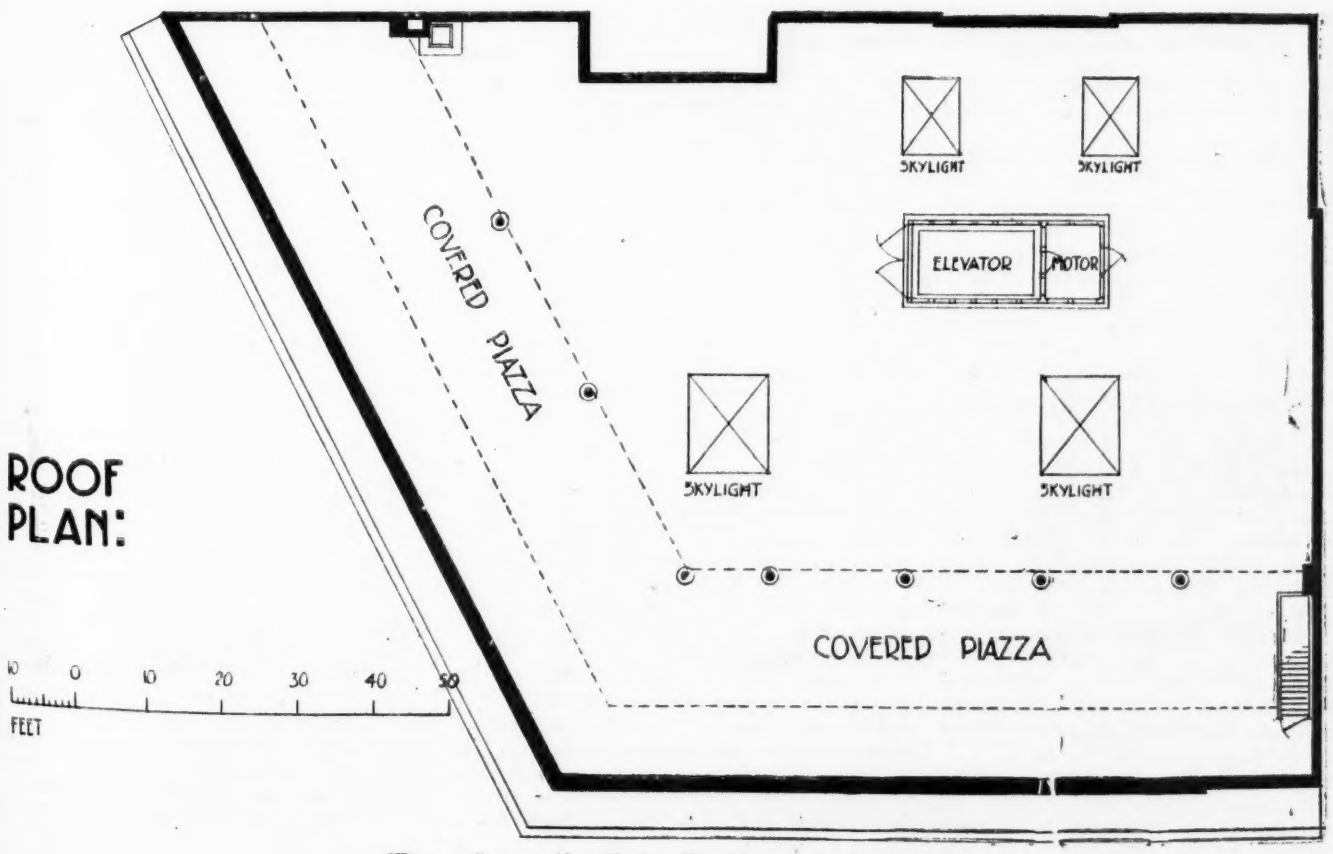
When spirit is kept in bulk to a moderate amount an ordinary galvanised iron tank sunk in the ground may be used, built in with either bricks or concrete, a layer of the latter being laid beneath it. It should have no drain on account of the danger of leakage. A pump in connexion with it draws off the spirit. The storage of the larger amount necessary for public garages is usually in large cylinder tanks, which should be buried at least 2 ft. under ground, and be embedded in Portland cement concrete, say 12 in. thick, and have a vent pipe of iron (with a fine wire screen near the tank connexion) carried some feet above the roof of the garage. It should have a depth-gauge calibrated to read off the amount of petrol in the tank according to the level, and will be connected with a smaller tank by a semi-rotary pump. This, also provided with a gauge, holds about 40 or 50 gallons, and its height is such that it supplies the car by gravitation. The pump-house, in which it is usually placed, should have a cement floor 6 in. lower than the door sill, and should be ventilated by an upcast flue of iron or brick carried above the roof and with an opening near the floor, but otherwise should have no opening except a fire-resisting door, unless its position is at a considerable distance from any other building.

Messrs. Gilbert & Constanduros have carried out for Messrs. Tilling a well-arranged petrol store. It is an underground chamber, 16 ft. 6 in. by 8 ft. 4 in., lighted on the top by pavement lights. In it two

* In this case, by-the-bye, the defendant had used petrol for cleaning the body of his car, in itself an offence under Clause 14 of the Secretary of State's Regulations, unless all due precaution is "taken *to prevent petroleum spirit from escaping into a sewer or drain*," in which case as much as one gill may be used for cleaning or for the repair of tyres.



ELEVATION : : TO BROADWAY



ROOF PLAN:

Winton Garage, New York. Mr. Chas. A. Rich, Architect.

E 2

coupled and one single tank, 8 ft. 5½ in. by 4 ft. 6 in. diameter, stand, not on the floor, but on R.S.J.'s which lift them sufficiently for examination of their underside and the floor. They supply, by means of a rotary pump, the two feed tanks.

With regard to the exceptional care to be exercised in arranging the drainage, to which I have already referred, the London County Council publish detail drawings of both brick and cast-iron intercepting tanks through which all surface drainage must pass before entering the sewer. These, of which the depth is 4 ft. 6 in. by 2 ft. 6 in. square, are arranged in series, and ventilated by a 3-in. pipe, show a modified arrangement in use at Messrs. Tilling's premises.

The carbide store, where one is found necessary, can, without notification to the authorities, hold 5 lb. of carbide of calcium in 1-lb. hermetically sealed cans, and up to 28 lb. without a licence. It is advisable to arrange for the storage of this a separate cupboard or store, which should be well ventilated.

It is of high importance that there should be no risk of the temperature of the motor-house falling to freezing-point, and allowing the circulating water of the motor-engine to freeze. As regards, however, the heating and consequent drying of the atmosphere, it should be remembered that there are two conflicting claims to be satisfied. Expert carriage builders plead on behalf of the painted body and wheels for a house 'which cannot be too dry'; while Dr. C. O. Weber, the authority as far as rubber is concerned, states that tyres are likely to 'keep distinctly better in a damp than a dry room.' Keeping a balance between these two claims we find that the motor-house is best when dry, but not unduly so. Its temperature should be about 60° F. The heating apparatus, of course, should have no opening from the motor-house, but be arranged with external access, and a low-pressure system with radiators will be found the best. These may be placed as found advisable, but in a garage of any size there will be a considerable advantage if a cupboard be provided containing a small radiator, to be made use of when drying rugs or cushions, and with ventilation to allow of the escape of the resultant steam.

Provision against fire should be attained by means of hydrants, chemical extinguishers —of which there are so many varieties—and by bins containing sand, which is most useful in extinguishing low running fires, since water thrown on burning spirit is of little use; indeed, would increase the danger. In large garages sprinklers should be inserted in the ceiling or roof.

The day-time lighting should be effected by windows which do not admit south sun, and if by skylights these should have the usual studio northern aspect. The Dunlop firm, by the way, recommend as the best light for the tyre-store the same yellow light as photographers prefer.

For artificial light there is none obviously that can compare with an electric system. This, however, is not always available, and in that case when either gas or oil is employed the lamps should be on the outside of the windows, through which their light plays into the inside of the house. When electric light is used the plugs should be preferably 4 ft. above the floor, on account of the danger of explosion from a plug-spark. For the same reason there should be no plug in the pit.

Some of the rain-water may well be gathered either into a butt or tank, and will be found valuable for washing purposes. A stand-pipe should be placed against one or more of the walls, with a screw connexion for hose and rose, or for the very useful washing-brush, the handle of which carries down to the head a supply of water.

The storage place for tyres, testing apparatus, pumps, and spares should be distinct from that in which cloths, cleaning oil, brushes, waste, etc., are kept on metal-covered shelves, and with proper ventilation. There should be rack or shelf accommodation for rugs, extra cushions, and the like.

The workshop is a feature as to which the owner of the car always has his own views. He may merely wish to have the most simple repairs carried out there, or he may be himself, or else employ as chauffeur, a skilful engineer whose pride is that the car need never go back to its maker in case of mishap and consequent repair. In the latter instance, a lathe, a drilling machine, a forge—perhaps an anvil—would be asked for, and if heavy parts have to be dealt with, a portable crane, or a differential hoist would be found of much use. Of course, when forge or blow-pipe work is done, it should not be in any part of the building directly accessible from the motor-house itself. In any case, a full-size work-bench will be needed, so placed in front of a window as to be well-lighted, and provided with a good vice, preferably of the swivel type. Proper drawers, shelves, and tool racks must be arranged for.

I have so far touched upon most of the principles and attributes of the motor-house, illustrating various points as they arose by plans and views which have been kindly placed at my disposal. It may be as well if I here, before discussing the other side of my subject, refer to one or two other designs which, I think, illustrate what I have been saying.

Your President's plans for the garage at Wallingford I recommend to your careful study. In this very comprehensive and complete scheme he arranges for two houses of four and two bedrooms respectively, and for a number of other bedrooms for the use of visitors' chauffeurs. The latter have also a messroom, drying-room, and bath. There is an engine and dynamo-house, 25 ft. by 18 ft., and an accumulator-room for the electric installation, and, lastly, a motor-house, light 60 ft. by 20 ft. The fall of the ground has been most ingeniously utilised for the lower story of the houses.

I have been lent a plan and view of an American type of garage, designed for the use of the residents in a large block of flats in the suburbs of Baltimore. It is primarily intended for putting up the cars of visitors, and its arrangements therefore are of the simplest.

Mr. Wilson Eyre has been good enough to send me drawings of a country-house in Pennsylvania, and its garage treated as a component part of the design.

The same architect's somewhat larger motor-house at Long Island is interesting as showing a good arrangement of washing space, and that it is possible to obtain a well-lighted place for such work, and to avoid an unsightly glass-roof.

Mr. Ernest Flagg, of New York, sends me illustrations of the house he has lately built for himself in 40th-Street, which includes accommodation for his own automobile, his chauffeur, etc. The problem was the difficult one of combining this with the ordinary town-house on a plot of land 29 ft. in width. His drawings show that he has done this with much thought and skill, and by means of a specially ingenious employment of a lift renders a portion of his basement available for car-storage.

I am especially fortunate in being able to show examples, not only of the smaller houses, some of which you have already seen, but of the garages of some size as schemed and designed not only by English but also by American, French, Dutch and other architects, who specialise in that particular direction.

A garage may be built for one of two purposes. It may be meant for some special use, such as housing a number of motor-cabs, or omnibuses belonging to one particular company or proprietor, or it may be meant to receive and house cars of various descriptions and sizes placed there for a longer or shorter time by their owners. In the former case what has to be kept in view—and with motor omnibuses especially—is the fact that the vehicles come in and go out in some special rotation or order, and that the earliest to leave in the morning should have facilities for being so stabled that in order to do so they disturb as few as possible of those placed in front of them.

A simple plan prepared by Mr. W. E. Hardy may serve as a type of arrangement with this in view. The garage accommodates twenty vehicles in two rows of ten each, and there is enough yard space to allow of such free movement that—at the worst—only one vehicle has to be moved to get another out of the shed. The offices are near the entrance to the garage and adjoin the workshop, which is equipped with such supply of tools as will allow of all ordinary repairs being carried out. It contains two lathes, one small drilling-machine, a shaping-machine, a grinder, a forge, and a wheel-press for re-tyring. The centralization of the offices and workshop, and the control of the latter by the former, are of much advantage. The petrol and filling tanks are also under this supervision, and are kept distinct from the carbide store where all generators are charged.

The plan of the garage of the Metropolitan Motor Omnibus Company shows that, here again, only one vehicle need be moved to allow of that behind it leaving the shed. A series of stancheons on either side of the open yard carries a travelling-crane which serves to lift the body of any car, as required, from its chassis.

The plan of a large garage, kindly lent me by Messrs. Gilbert & Constanduros, shows the premises of the London Road-Car Company, originally arranged for horse-drawn cars and modified to serve as garage, with workshops and the very large necessary stores adjoining. There are three car-houses in communication, but separated by open yards, to meet London County Council requirements as to cubic space. They are 160 ft. by 60 ft., 60 ft. by 60 ft., and 115 ft. by 52 ft. The engineers' shop and fitting shop are about 200 ft. long.

It is of course highly desirable that there should be few piers, columns or stancheons to cut up the floor-space and interfere with the free disposal of the cars. A roof of steel cantilever principle best serves this purpose, as, for instance, in the London Motor Bus Company's garage, which has a length of 220 ft. and a span of no less than 115 ft. without any intermediate support.

Most often, however, the site built on is one which to utilise to its utmost it is necessary to design a building of several floors, and a good example of this treatment is the Winton garage, New York, of which Mr. Charles A. Rich is the architect. This averages 130 ft. by 100 ft., and has four floors each with washing spaces, and with car access obtained by a lift 18 ft. long by 13 ft. wide. Mr. Rich writes to me about it as follows:—

'In regard to planning there are one or two things important to the minds of all automobilists. From the entrance of the building to the turntables should be a direct straight line, as shown on the first floor, and the washstands should be well out of the way in the rear. In this particular garage you will note that there are incoming and outgoing turntables near the elevator. The first floor, possibly better than any other floor, shows the large space unbroken by columns.

'The roof of this building is interesting, as it consists of an open tile floor, flat skylights in the tiles, and a covered piazza around two sides formed by the Italian tiled sloping roof, and it will be noted that the elevator runs up to it. A trying-out run of a circle around the elevator of about 100 ft. is obtained; and under the piazza the men work on the machines in summer in the outdoor air, and protected from the rain. The scheme makes a delightful working space, to say the least.'

In London there is a good example of the use of the flat roof space on very similar lines. The Argyll Garage in Newman-street, built in L-shaped form, has a clear run of about 200 ft.; a space, however, in this case used rather for washing purposes than as a track and work-space, as in the Winton Garage.

Mr. Calvin Kiessling's Boston Garage is not very dissimilar to the Winton. It is a parallelogram divided into large bays 25 ft. by 20 ft., and contains three floors in addition to a basement. The lift is of unusual length (20 ft. by 10 ft.), and is served by two turntables of 15 ft. diameter. On the top floor is provided a day-room, or lounging-room, for the chauffeurs in their 'off-time.'

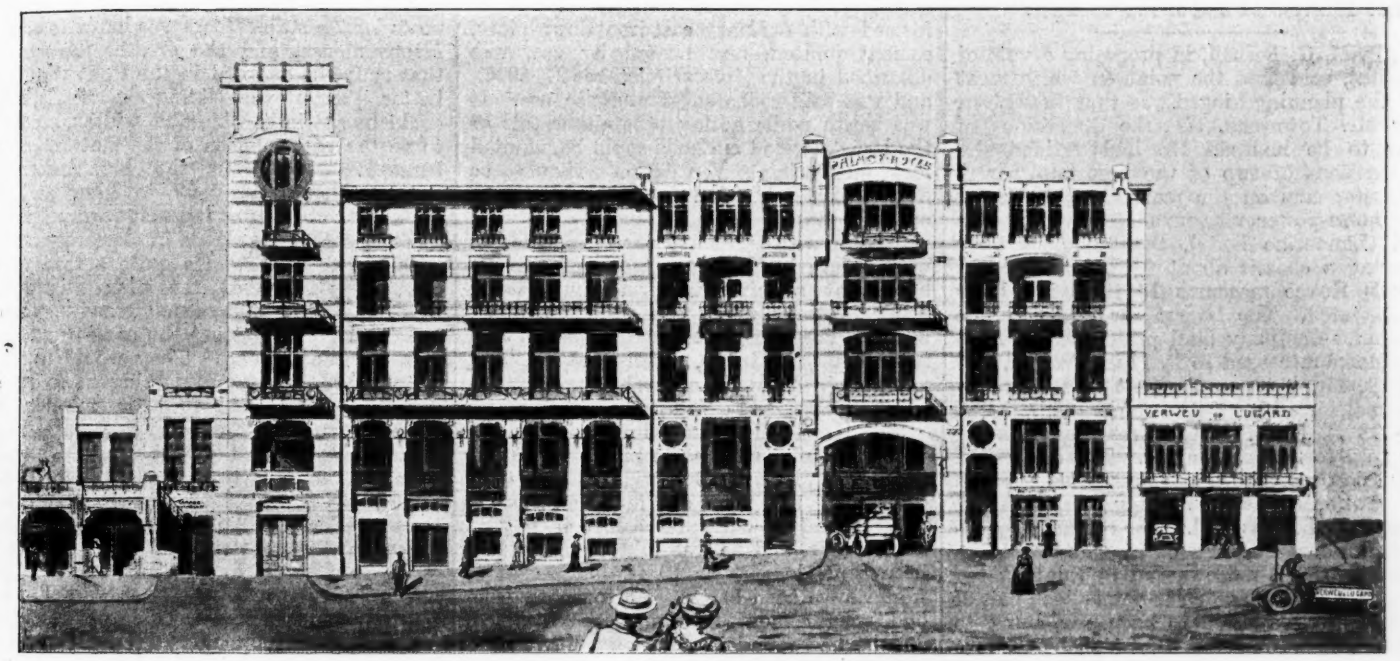
The turntable which I have just mentioned is so extremely useful a feature that it is surprising it is not more adopted, even in quite small garages. One important gain it effects is making it possible for the car to go into its house head forward and to come out from it the same way. This economy of revolution-space causes its extra expense to be well worth while.

Another arrangement to this end is that adopted by Messrs. Meyer & Rademaker, architects, in their garage at The Hague. Here the car on entering is run on to a low frame carried by small roller wheels on a pair of lines and conducting it to the garage or the workshop. This whole plan is simple and ingenious.

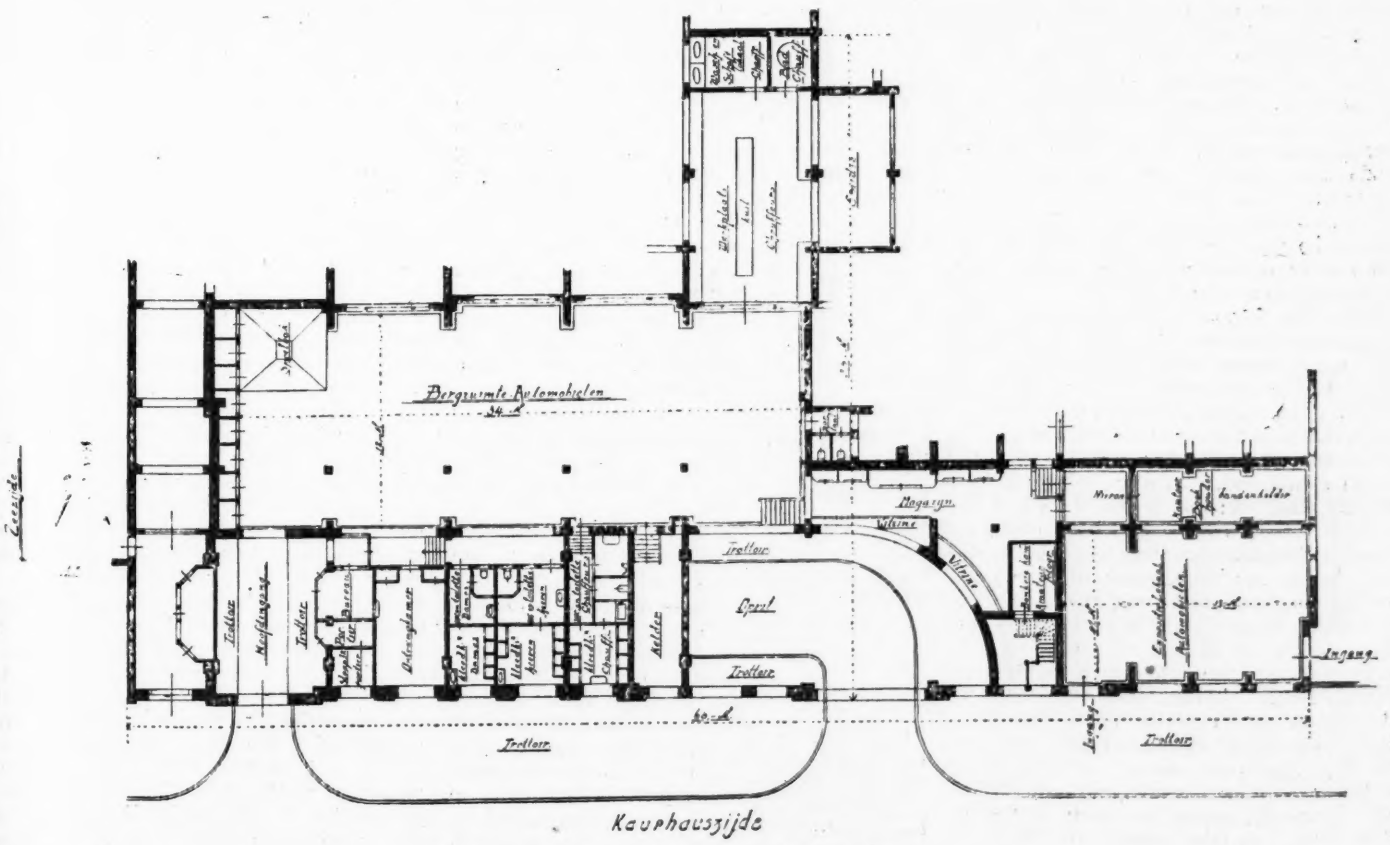
The large garage of the Electromobile Company in Hertford-street, W., covers more than half an acre of ground, and, like some of the others I have mentioned, utilises the roof for washing purposes. The cars stored here are of a standard size, and thus, for instance, the pit can be bridged over with permanently fixed channel irons, 4 ft. 6 in. apart, upon which the vehicle is run for underneath work. The pits are capable of simultaneously accommodating thirty cars. There is a very admirable arrangement of the movable platform or traverser I have just mentioned. Being devised for electromobiles, a system has been arranged by which the car coming in is placed over a lift and relieved of its battery, which, on reaching the basement, is run into the charging-room. Of the three hydraulic lifts which can take cars 16 ft. long one runs to the roof.

A difficult problem has been well met in the garage connected with the Palace Hotel, Scheveningen, and built on an extremely narrow site. The pronounced slope of the street allows access to a lower and an upper garage, various offices being arranged under the inclined plane by which the latter is reached.

Mr. Tanner lends me the plan of a garage he has lately carried out, where he had to make the best of a very confined space. The building, which is about 190 ft. long, is planned on both sides of a top-lighted space, on all floors above the ground-floor, 18 ft. wide. A 10-ft. bridge across the latter places them in communication. The lift is of generous size, being about 17 ft. by 13 ft.



Garage, Palace Hotel, Scheveningen. Elevation.



Garage, Palace Hotel, Scheveningen. Plan.

Mr. Koopman's garage at Haarlem, he tells me, is not primarily intended for housing cars, but rather for attending to and repairing them, and is particularly well stocked with machinery to this end.

The design of M. Genuys, of Paris, which was exhibited in last year's Salon, shows that he has made full use of the basement, which he lights with large expanses of floor-lights. This and the gallery on the first floor are reached by two car lifts. The construction throughout is reinforced concrete, and the building is 225 ft. long with a central span of about 30 ft.

Mentioning to a friend the other day the title of my lecture, he was cynical enough to suggest that I should find it difficult to spend the whole of the time allotted to me on so simple a subject as the building of a motor-house or garage. I have done so, however, and indeed have material I have had to discard. For buildings such as we have been considering this evening, mine is, as far as I know, the first attempt to collect the facts and to co-ordinate the data. That, Mr. President and Gentlemen, is all I claim for what I have said and shown to-night."

Mr. M. G. Pechell, in proposing a vote of thanks, said that the point on which most of the planning hinged was that first given by Mr. Townsend, *viz.*, the dimensions of car to be housed. He had verified the dimensions of two of the best known six-cylinder cars on the market. The Napier 40 horse-power measures 15 ft. 7 in. over all (Limousine body), the 60 horse-power having a chassis about 6 in. longer. The Rolls Royce measures 15 ft. 6 in., body not stated. The largest car made by the Daimler Company (and presumably a four-cylinder) measured 15 ft. 11 in. over all. In short, Mr. Townsend's limit of 16 ft. was correct for all present purposes, while 13 ft. to 13 ft. 6 in. would cover any ordinary car up to 25 horse-power. The car length *plus* 6 ft. was a good all-round rule for length of car-house, but the working benches should be allowed for as well. The ordinary coach-house doors in pairs opening outwards he agreed with Mr. Townsend in thinking the best for small private car-houses, one pair of doors being allotted to each car, hung to strong posts or cased steel stanchions. He hardly thought that drains were advisable in the car-house, except perhaps in the pit, a slight fall outward of the whole floor being sufficient for all requirements. In fact drains were not encouraged in London under the jurisdiction of the London County Council. Finely-finished granolithic made a good floor. One of the later modern floor compositions into which sawdust entered largely had been used successfully at several trade and private garages; among the former at "Automobilia" and the Motor House. It was said to be non-slippery, and should be warmer than granolithic in use. He hardly agreed with Mr. Townsend in suggesting so short a pit as 6 ft. He should prefer about 8 ft. 6 in. as it was then possible to get out of the pit without shifting the car. This, apart from convenience, might prove the safety of the occupant should a pit explosion occur. The width, 3 ft., was quite right for the modern car but a trifle too wide for the older type French cars still in use. The depth mentioned, *viz.*, 4 ft. 6 in., was that usually adopted; but in many he had seen a depth of 3 ft. 6 in. had been given and found sufficient. Recesses in pit walls were very handy for lamp, tools, etc., or a projecting course of brickwork, as a support for a bench. He preferred brick or stone steps to a ladder for access. A capital open-air substitute for the pit was possible when sharply-falling ground was available. A staging of two runners, on a cross-beam and two posts, brought out over a cutting in the slope, gave easy access to the underside of the car. A similar idea had been adopted at Weymouth, where the back half of the shop floor had been sunk about 4 to 5 ft., runners in pairs on trestles bridging this space to the back wall. The advantages of good light, convenience, and safety were obvious. The Rover Company's garage off Theobald's-road consists of two floors, the upper being provided cleverly with a sling-pit as follows:—A trimmed opening in the floor had a strong wooden tray with sides slung some 2 ft. 6 in. or 3 ft. down into the room below, into which the workman gets, the car being then pulled over him. The heating question was important. For private car-houses, especially of the converted coach-house type, one of the stoves burning smokeless fuel was convenient, cheap, and safe against fire risk. Hot-water heating by radiators was, however, the best system when obtainable. A letter recently printed in the *Autocar* was interesting on this point. The writer stated that the trouble involved in correctly feeding a coke-fired boiler often led to the fire going out at critical moments. He then installed a copper tubular boiler heated by gas with the best results as to regularity and want of trouble. The consumption of gas he gave as nearly 10 ft. per hour, and considered the extra slight cost to be thoroughly repaid in certainty. A simple hot-air apparatus formed with ordinary cast-iron down-pipes, cement jointed, and heated by gas, was described in the *Autocar* (October 27, 1906), and was said to be satisfactory in use. It was worth while noting that either this or the last described methods could be adapted for oil-heating. Ventilation should be ample, certainly, full use being made of opening sashes and fanlights. A roof ventilator with trunks to various car-houses was useful; in fact, any means of keeping houses at a fairly uniform temperature. Among fittings a sink was one of the most useful. Very ample storage for coats and rugs was advisable, well heated and ventilated. The subject was by no means one to be exhausted in detail in a short paper.

Mr. H. Tanner, jun., in seconding the vote of thanks, said, as to pits, that he put in a pit 8 ft. long and 3 ft. wide and 4 ft. 6 in. deep about two years ago in a small public garage, and recently he asked if it was satisfactory, and he was told that if it had been 2 ft. longer—or 10 ft. long—that it would have been better. As to flooring, he had used cement flooring once or twice, and he had found it get spongy in places; but if they used a granolithic floor, unless they used small chips the surface was liable to become rough. In his plans, shown by Mr. Townsend, the lift was ample and took up two small cars, and it was in connexion with a garage for 600 cars. The top floor was used as a washing place. There was a small heating apparatus, called the Kane heater, which he had used in two or three small garages. It was a gas hot-water radiator, and the gas was surrounded by a gauze on the principle of the Davy lamp, and it was perfectly safe to employ when they could not get an hot water heating system. It was an American arrangement, and its consumption was low—the patentees said about 7 ft. per hour in the advertisements. As to widths of doors, he understood Mr. Townsend to say that a width of 9 ft. was, generally speaking, a good width, but he had designed a garage for visitors at a club which had doors all the way on either side, and he made them 10 ft. centres, with 6-in. posts, which made it 9 ft. 6 in. [Mr. Townsend: You are generous. He made the doors 9 ft. high, and the garage would take most cars. He had often found in driving a car that 10 ft. width was not much if one wanted to turn sharply just outside.

A member asked what the minimum turn for a 16-ft. car should be—the radius in which an ordinary car could turn.

Mr. W. Wonnacott said that Mr. Pechell had told them that under the London County Council by-laws no one was allowed to put drains in the stable or pit. He (the speaker) had done it several times, and he should like to know what Mr. Pechell's authority was for the statement he made.

The Chairman, in putting the vote of thanks to the meeting, said the point raised as to the space required for turning a car in was of great importance. An illustration had been shown of a garage by an American architect, and it seemed impossible to get a 16-ft. car into it without going over the flower-beds. He thought that a maximum width of 40 ft. in the yard was quite sufficient for a 16-ft. car, but the turn could, he believed, be done in less, and cars turned in streets of considerably less width than 40 ft. A 9-ft. height must be given to the door as a minimum, but inside the garage must be considerably higher, as it was often necessary to lift off the top of the motor—for summer use, for instance—and arrangements for the tackle necessary to lift it had to be made just in the same way that in coach-houses provision had to be made for taking off the tops of carriages; that was an important matter, and it was difficult to arrange for it when one had to get rooms over the top of a garage. He thought that, as a general rule, domestic rooms in private garages should never be put on the top of the motor stables. The space occupied by the door-posts for the stable-doors was likely to cause inconvenience, and the greater the spaces that could be adopted in the front wall the better. The use of sliding shutters, which could be got in considerable widths, seemed to be the best solution of the matter. The turntables shown in the big American garages were quite new to him, and it appeared to be a most ingenious arrangement where the lift was placed in close connexion with the turntable. He quite agreed with Mr. Townsend that the plan might be adopted here in quite small garages, where the difficulty of getting the car in and out was the main thing. They would like to have heard or seen something as to some definite architectural form in relation to these structures. The country garages now being erected looked like stables, which they were not, and the town garages looked like anything from a restaurant to a private house. We were still in an experimental stage in the matter, and the necessities of the case would, in due time, and when we had settled down to what was wanted, lead to the evolution of a suitable architectural form. An entirely new development like motor-cars must bring in its train a new form in architecture.

The vote of thanks having been heartily agreed to,

Mr. Harrison Townsend, in reply, said he had been trying to formulate what had already been cast into definite form, and the questions put to him showed that the matter was more or less indefinite. He was glad to be supported by Mr. Pechell as to the length of a car; 16 ft. was a length of perfection. But he did not follow him as to the London County Council and petrol and drains. He had put upon the walls some London County Council diagrams showing how the petrol that must get into the drains was to be stopped before it got into the sewer and did harm. They could not avoid petrol at one time or another getting into the drains, but it was intercepted under the London County Council regulations by a brick or iron interceptor, and it was prevented from doing harm. As to the pit, he did not care whether it was a short or a long one, and he was inclined to think that he was on the meagre side when he said 4 ft. 6 in.; but one could not get out of a 9-ft. pit much more easily if the petrol and floor did catch fire than from a 4-ft. 6-in. pit, supposing the chassis overhead was 12 ft. or 14 ft. long. Mr. Pechell's suggestion for an open-air substitute for the pit reminded him of a case where that had been done. An architect had built himself a garage, and he had relied on the fall of the ground to run, at the back of the motor-house, a kind of platform the necessary width to get his car upon it and to examine it underneath, all in the open air. His conclusions were the same as Mr. Pechell's as to the cement turning out badly.

There was one garage where the nail of his little finger, having got through a layer of dirt and oil, was able to scratch away the cement. He was very much interested in the Kane heater and the gauze protector. As to the turning space of a car, it depended on the length of the car. Now that they knew how large a number of turntables the Americans were making most of them would be inclined to recommend the use of them even in small garages. They affected the width, of course, but where they were provided there were opportunities for planning arrangements in the design of the garage, such as circular pits, etc. It would lead to all kinds of possibilities in design, but it meant a more expensive building, for the same length would be required as if it were an ordinary house without a turntable, and the diameter would be greater to allow the 16-ft. car to turn in the building. As to the President's remarks about motor garage planning and the character of the architecture, that was a matter that must take care of itself. In America it had done so, and many of the buildings were built of solid masonry and were figured on the detail drawings 3½ in. thick.

The Chairman said that the next meeting will be held on February 21, when Mr. E. P. Warren will read a paper on "Oxford."

The meeting then terminated.

THE ARCHITECTURAL ASSOCIATION SPRING VISITS.

III.—Victoria and Albert Museum.

Sir Aston Webb conducted a very large party of members of the Architectural Association over the new buildings of the Victoria and Albert Museum at South Kensington on Saturday, February 8, on the occasion of the third spring visit.

Two previous inspections had been made by the Association, at which times the works were in a state of naked construction, and what little finished design existed was hidden behind a forest of scaffolding. The two main façades have since been practically completed, and save for the pavement boarding, the external effect of this great Government undertaking in the cause of education can now be surveyed. The interiors have also progressed to such an extent that the whole work should now make rapid advance towards completion.

The exterior conveys a clear impression of the immense scheme of which it is but the outer expression. The design is harmonious in form and material with the other large public buildings of South Kensington, but from force of circumstances takes no part in a comprehensive scheme such as this group of great official works should possess. The convex plane of the main front while following the line of the road is perhaps not the most satisfying element in the design; it serves to produce, however, a square angle at the Exhibition-road corner.

Portland stone is the principal material, fully moulded and carved, in combination with red brick; both are arranged more in a concentrated than a scattered way. The detail bears the distinct impress of the architect's manner to the exclusion of sheer forms belonging to types and periods of architecture. The plan of the extension and its adaption to the existing galleries is a great conception. The whole site is "wedge" shape, and in the old buildings an attempt was made, to a certain extent, at symmetrical planning. A further development, however, as seen in the large architectural and textile courts, was a rude departure from so desirable a principle. This disturbing element has served to prevent the scheme from being a still finer building.

The new plan is full of design and is successful from every point of view. The vistas are extremely fine and well arranged; galleries are of varying sizes and shapes, so that the objects may be satisfactorily placed according to their respective necessities; circulation for the public, supervision by police, all kinds of facilities for students, are some of many matters which have received careful consideration.

A main avenue is intersected at the central hall by the east and west courts, which are about 600 ft. in total length, and upon this basis the plan is developed. The courts in the centre of the site are placed square and parallel with the main axes, while the galleries on the façades take the converging lines of the frontages. The waste corners come in very usefully as air ducts, etc.

Interior decoration is broad and simple, and consists generally of modelled plaster work in the courts extended to a restrained use of marble in the halls and staircases. The whole treatment, which is based upon the enrichment of the old parts of the museum, may be said to be well subordinated to the interest of the specimens to which it forms the background. Plaster surfaces have a rough finish so that colours will show to their greatest advantage.

Sir Aston Webb's description and explanation were of great value to the visitors, and indeed made the occasion very successful in every way.

MAGAZINES AND REVIEWS.

The only subject in connexion with decorative art which is illustrated in the *Burlington Magazine* this month is a decorative alphabet by Hans Weiditz, a XVIth-century German artist, whose series of initial letters is reproduced; well-designed capital letters filled in with the fat nudes and grotesque fancies of the German art of the period. They are interesting but not beautiful, nor would any one wish to see their style adopted or imitated now. Among the "Notes on Various Works of Art" we read, under the heading "Winchester Cathedral," that it is satisfactory to learn that the Society for the Protection of Ancient Buildings is keeping a watchful eye on the work in progress; a statement which, in view of the recent correspondence in the *Times*, and its results for the Society, is rather amusing.

In the *Art-Journal*, under the head of "Fine Church Metal-Work," we have an illustration of a very beautiful monstrance for Westminster Cathedral, designed by Messrs. Omar Ramsden and Alwyn C. E. Carr. The upper portion forms a large cross of open-work, the detail in lines happily expressing the ductility of silver. Compared with this, the much larger and more ambitious design of the silver altar front for St. Mark's Church, Philadelphia, by Messrs. Barkentin & Krall, is much less essentially silver work; it might be executed in wood carving just as well as in silver, or better; all that it would specially derive from the use of silver is the lustre of the metal and the sense of its money value. Mr. Service's article on "British Pottery" is illustrated by some good examples of modern work, not all of equal artistic value, however; the realistic flowers on the two designed by Mr. Moorcroft do not really represent "design" in the proper sense of the term. Mr. E. C. Clifford continues his essay on "Woodlands," which contains much valuable information and observation about trees, together with some fine illustrations from nature and from painting.

The *Architectural Record* (New York) contains an article by Mr. Frothingham on "Greek Architects," which would be of more value if he gave the authorities for or sources of his information. Mr. William Herbert contributes an article under the title "An American Architecture," expressive of the wish that America should endeavour to evolve an architecture of her own. We do not believe that has ever been done consciously and deliberately; but we are so far with Mr. Herbert as this, that we have frequently expressed regret that American architects should have so completely thrown themselves, as it were, into the arms of the French Ecole des Beaux-Arts, and apparently aimed at being more French than the French themselves. The author adds some examples of modern American buildings by a particular firm of architects, Messrs. Schmidt, Garden, & Martin, as examples of, as he says, a definite "attempt to express the function of the different buildings" and "a sincerity in the use of materials in expressing the structural facts." The buildings illustrated perhaps merit this praise, but they are not very beautiful, and somehow the suggestion that they represent a nucleus of an American style seems just a trifle ludicrous. It is so easy to say—"We want an original, national style"; so impossible to define such a thing in actual drawing or building. "A Pioneer American Architect," a notice of William Strickland (1787-1854) and his buildings, is interesting; and Mr. Almirall's project for the architectural treatment of the proposed Plaza and Central Library in Brooklyn is a grandiose scheme, though it certainly does not illustrate Mr. Herbert's suggestion for an American architecture, being Ecole des Beaux-Arts to the core, even in the very way the drawings are got up.

The *Architektonische Rundschau* contains nothing worth special note. In the *Berliner Architekturwelt* is a "Study for a Crematorium," apparently a competition first premium design, by Herr A. Fröhlich, which is rather fine as an adaptation of classic forms to a modern funereal structure. Herr Von Tettau's study for a "Kaiser Wilhelm-Turm," a commemorative tower on a rocky height backed by masses of dark trees, is one of those rather grim pieces of architectural expression in which the German architects, or some of them, excel.

The *Reliquary*, which is now edited by the Rev. C. J. Cox, contains an article on the "Treasure of Saint Antonio" at Padua, which judging from two or three illustrations given (hardly as well executed as the subjects deserve) contains some ancient plate of most remarkable interest and artistic value. Mr. Tavernor-Perry contributes an article on "Abo, the Ancient Capital of Finland," with some excellent pen-sketches of his own of the quaint cathedral and another old group of buildings.

In the *Church Builder* (quarterly) Mr. Caröe, in his "Occasional Notes on Church Furniture" (in continuation of Mr. Micklethwaite's work), makes a point in showing that out of a period of a little over thirteen hundred years of church-building, counting down to 1800, 950 years were other than Gothic. The enthusiasm for Gothic in the XIXth century "brought about a short-lived revival of the manner in civil use," which did not prosper, and "the divorce of modern civil and ecclesiastical architecture was consummated in the London Law Courts, which failed to express either the Gothic ideal or to satisfy modern practical demands of planning and comfort."

> "But within the church the remarkable achievement of a few designers in realising success under modern conditions, the force of the reaction against a bald classicalism on the one hand, and against the virtual negation of all ritual on the other, have captured the senses of churchmen of all schools, and set up an almost universal standard of accepted ecclesiastical manner, founded upon that of a short period only of the church's history, ignoring in the main both what went before and after. . . .
>
> Yet architectural history is precise upon this point, if upon no other: that in all the great periods of architectural development, religious and civil architecture have run in harmonious harness, and religious architecture has generally been in the van. The present divorce is one of vast interest as to its deeper significance."

That is well put; but nevertheless, it seems to us that Mr. Caröe does himself, not infrequently, build Gothic churches.

In the *Antiquary* is an article by Mr. L. F. Salzmann, on "Recent Excavations at Pevensey"; a work which apparently has had to be abandoned halfway for want of funds. A section is given of a Roman wall there, with a rubble core and greensand facing-stones. The site fortified,

Mr. Salzmann says, was in Roman times a clay hill:—

"The Romans cut away the edge of this hill, exposing a flat clay bed some 15 ft. wide, which they prepared by puddling the clay; on the marsh side they anchored the ground by driving in numbers of oak stakes or piles; on the puddled clay they put in a footing of alternate layers of chalk and flints, 15 ft. wide and 3 ft. deep; in a few places where the ground was marshy and liable to slip they had laid massive planks 10 in. thick, right across this footing. Next came a layer of concrete formed of flint set in hard mortar, and on the top of this the plinth, and then the wall itself, about 12 ft. 3 in. thick and 25 ft. to 30 ft high, consisting of rubble core and facing-stones of greensand from the Eastbourne quarry."

In *Scribner* ("The Field of Art") Mr. Russell Sturgis writes a short essay on "The Architect and the Critic," the point of which seems to be that the architect (in the States) is always hurried in his work by the impatience of his client, and has to carry it out as best he can with a host of assistants, so that he never achieves that abstract perfection which would satisfy the critic. This is true for the most part of England also, though probably not to so great an extent as in the States. The only remedy seems to be that the public should be educated into thinking that good architecture cannot be produced in a hurry, and is worth waiting for.

In *Harper* Mr. W. D. Howells, the American novelist, gives in a picturesque article his impressions of "Nine Days' Wander in York"; the influence of an English cathedral city upon the mind of a gifted American is an interesting study, which is accompanied by some excellent sketches by Mr. Ernest Haskell. Mr. Howells seems to have found York the most impressive of all the English cathedrals; externally perhaps it is; there is more largeness of scale, more grandeur and completeness than in any other.

In the *Century* "The Spell of Egypt, as revealed in its Monuments," is the title of an article by Mr. Robert Hichens, the author of "The Garden of Allah." It is a charming monologue on the Sphinx, the Pyramids, and some of the great temples, and the sources of their effect on the imagination. A grey drawing of the Great Hall at Abydos, with the crimson sunset sky showing at the end of the colonnade, is a very impressive illustration by M. Jules Guérin.

In the *Pall Mall Magazine* Sir John Treloar's article "Glimpses of London City" contains some curious bits of historical record, accompanied by some very effective illustrations from photographs, but without the too sharp and hard delineation sometimes found in illustrations of this class. "St Paul's from across the River," as seen in a misty half light, with the black posts and barges in the foreground, is admirable.

Our Land is the title of a small monthly publication of which the first number has been sent to us. Its objects are partly agricultural, but there is a good article on "Rural Housing and Sanitation," by a Civil Engineer, which contains some plain-spoken and useful truths as to the insanitary habits in many rural districts, especially in connexion with the pollution of water-supply.

The *Nineteenth Century* contains an article on "The Morality of Shakespeare" by the Editor of this journal—the only reason for mentioning it in these pages, as possibly some friends among our readers may care to look at it on that ground.

PICTURE EXHIBITIONS.

AMONG the new groups of artists which seem to be constantly springing up now is one which denotes itself as "The New Association of Artists," and is holding its first exhibition at the Goupil Gallery. We are unable, however, to trace in the exhibition any special or definite artistic motive: it seems to be simply one more collection of artists who have banded themselves together for the purpose of making joint exhibitions of their works. One is inclined to say, "Something too much of this." We can understand the motive, for instance, of the founding of the "New English Club," though we have little sympathy with their aims; it was a rebellion against standard conventions in painting. But we can recognise no special tendency among the "Twelve Painters" or the "Twenty-five Painters" or in this "New Association." They seem only to result in so many more minor exhibitions.

The New Association fills one room with water-colours and another with oil-paintings. Among the water-colours Mr. John Muirhead's drawings of subjects mainly connected with old buildings—"The Farmyard" and "Houghton Mill"—are in a very fine broad water-colour, rather of the old than the new school, and as good in landscape effect as in treatment of the buildings; and Mr. Arthur G. Bell's "Newbury Bridge" is a fine work of the same class. The examples of pure landscape among the water-colours seem rather experimental in style. Among the oil-paintings there are some fine works, the most important being Mr. Mouat Loudan's "O World, as God has made it." Is this the same picture that was at the Academy two or three years ago, or a study or replica of it? If it is the same, it is rather a disappointment; it certainly does not look as well here as it did at the Academy. Among the other things is a fine twilight coast landscape by Mr. Tom Robertson, "The Isle of Dreams"; two or three of Mr. Wetherbee's always charming landscape idylls; a coast scene, "Sea Wrack," by Mr. W. H. Bartlett, with a very fine sky effect; Mr. Arthur G. Bell's "The Fishing Hamlet, Hampshire," a remarkable and unusual landscape composition; and a study of "Moonlight" effect by Mr. E. Borough Johnson, which seems to be to some extent an imitation of the manner of M. Le Sidaner.

At the Fine Art Society is a collection of water-colour drawings by Mr. James Paterson, illustrating very happily the effects of colour and atmosphere which he obtains, in his peculiar style of execution, at the expense of the qualities of firmness and decision of delineation. We regard his style as to some extent a mannerism, at all events not what may be called a sound classic style of water-colour, but it has a value of its own, and gives a sense of colour and atmosphere in nature, though it is not like nature. Some of the drawings, such as "Inverkeithing Bay" (19), seem quite too washed out; but in others, such as "Corstorphine" (24), which we saw before at the Society of Water-colours, there is a remarkable effect of wind and movement in the sky; also in the very fine little composition, "The Lake, Willigrad, Mecklenburg" (48); perhaps the best thing in the room. Among others we note specially the view of "Old Cramond Bridge" (13), an admirable piece of colour; the nook of old houses and a wooden bridge under the title "Bell's Mill, Water of Leith" (17); and the drawing of the curious old panelled tower of "La Laguna, Teneriffe" (28), as singular a specimen of semi-barbarous architecture as one could wish to see.

Illustrations.

COMPETITION DESIGN FOR THE LONDON COUNTY HALL.

BY MR. H. T. HARE.

WE give this week the river elevation and two of the plans of the design by Mr. H. T. Hare, one of the eight architects specially invited to compete in the final competition. We subjoin Mr. Hare's explanation of his intentions in making out the design:—

"The following considerations have governed the design:—

1. The building has been set out on rectangular lines, as being the only principle consistent with a really fine composition. Adherence to the irregular frontage line of Belvedere-road could only be justified if the street line were strongly marked, and as this road must obviously be relaid out that condition does not exist. The gain in accommodation by following the present line would be inappreciable.

2. As the vast majority of persons coming to the building will come by way of the bridge it appeared reasonable that the principal entrance should be on the bridge approach rather than in what is virtually a back street. The problem was to arrange an access into the heart of the building without long and otherwise useless corridors. This suggested the open courtyard.

3. It was an open secret that the Public Hall was not to be built, and it was therefore treated as a detached building having little relation to the scheme as a whole. It was also generally understood that the accommodation was to be somewhat reduced, and it was therefore anticipated that those portions of the plan not contained within the main rectangular lines would disappear on rearrangement.

4. It was felt that the introduction of a great central architectural feature was undesirable on account of the colossal dimensions necessary to render such a feature proportionate. The two towers were designed to emphasise and give value to the length of the river frontage."

SHEFFIELD TOWN HALL AND THE LATE MR. MOUNTFORD.

MANY of our readers will have shared our regret at the announcement of the death, at the early age of 52, of Mr. E. W. Mountford, who we believe for some time lately had been in bad health, and had not been able during a considerable time to give personal attention to his work. In earlier days he must have appeared to all who knew him as a man of rather exceptional health, vigour, and energy.

The latter quality was shown in the manner in which he went into the competition for the Sheffield Town Hall, which was the commencement of his professional success, for before he gained that important competition he had no wide reputation as an architect. After that, of course, his position was made, and he had a number of important works to carry out, culminating in the Old Bailey Law Courts.

As we had on hand a large view of the Sheffield building which has not before been published, we give it this week *in memoriam* of its architect. The design is obviously influenced by the work of Mr. Collcutt (who influenced a great many of the younger architects at that time), and it is none the worse for that. More recently, Mr. Mountford's manner of design was a good deal modified and showed features and a character special to himself. But the Sheffield Town Hall remains an admirable building.

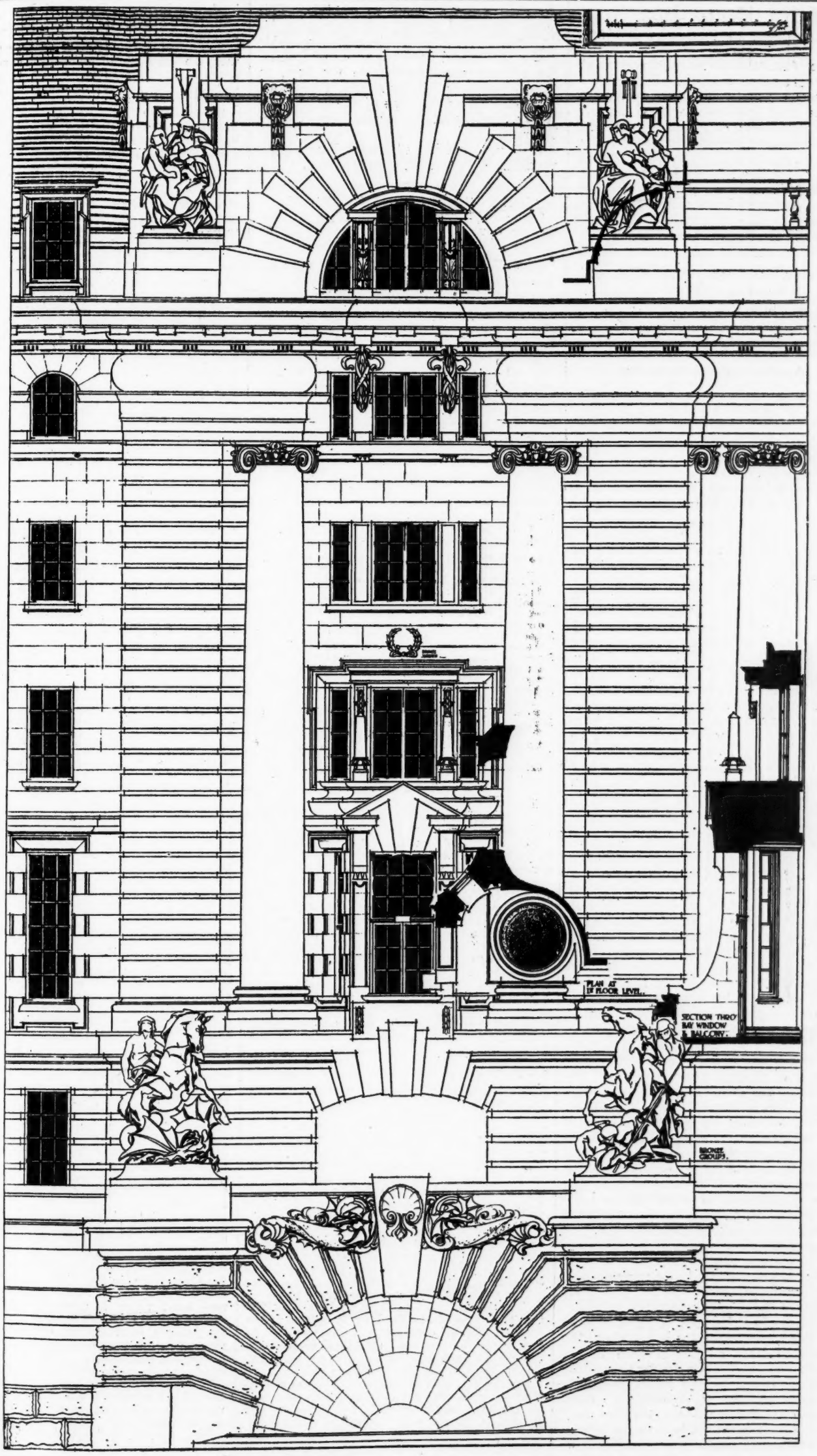
REMAINS OF ROMAN AQUEDUCTS.

THESE illustrations are from photographs sent to us by Dr. Ashby, the Director of the British School at Rome, in illustration of his articles on "The Aqueducts of Ancient Rome," the sixth chapter of which appears in this issue. These articles and the illustrations represent the fullest and latest investigation into and illustration of the remains of these great Roman engineering structures, the traces of which are in many places fast disappearing.

SELECTED DESIGN FOR THE LONDON COUNTY HALL.

WE give a reproduction here of the detail elevation of Mr. Ralph Knott's design for the County Hall, the elevations, general section, and two plans of which were published in our last issue; we had not space then for the detail elevation.

We should advise a little reduction of the section of the pulvinated frieze, which seems rather too strongly marked in comparison with the other members of the entablature.



Selected Design for the London County Hall. By Mr. Ralph Knott. Detail Elevation.

Fifty Years Ago.

FROM THE *Builder* OF FEBRUARY 20, 1858.

LONDON CROSSINGS.—Do not you think that it would be very serviceable to have a subterraneous passage for foot-passengers under the road just by the King William statue, lit day and night by the electric light, with well-holes for ingress and egress, and a light iron railing on granite steps, *à la* Thames Tunnel? Also another at the crossing by the Bank, Mansion House, and at Cornhill, Leadenhall-street, and other parts of London where the immense carriage-traffic renders it unsafe for foot-passengers.—R. H. D.

*** We do not know who "R. H. D." was, but he has the credit of having suggested a great public improvement many years before it was carried out.—ED.

THE SURVEYORS' INSTITUTION.

AN ordinary general meeting of the Surveyors' Institution was held on Monday, at No. 12, Great George-street, Westminster, S.W., when a paper was read on "The Railway Fires Act, 1905," by Mr. H. Colley Brierley and Mr. W. H. Christy Clay. In the course of a long paper the authors stated that the right of farmers and others to compensation for damage to property by fire caused by sparks from railway locomotives had up to the present time been defined by a series of decisions, from Rex *v.* Pease in 1832, to Atherton *v.* London and North-Western Railway Company in 1905. By sect. 86 of the Railway Clauses Act, 1845, power was given to a railway company "to use and employ locomotives, engines, or other moving power," and it had clearly been decided in the above cases that this section of the Act operated to absolve a railway company from the liability, to which they would otherwise be subject, for a fire caused by sparks from an engine, provided no negligence could be shown. It should also be noted that by sect. 114 of the same Act engines must be constructed so as to consume their own smoke. In order to secure this immunity from liability under the 86th section, the company must prove, as they usually could, that the engine was fitted with the best-known appliances for preventing the emission of sparks. The section did not protect a railway company, even when the engines were so fitted, if they were guilty of any negligence in other ways, as was shown in the case of Smith *v.* London and South-Western Railway Company. The invention and design of apparatus to prevent the emission of sparks by locomotives had during past years received much attention from mechanical engineers, and several ingenious contrivances had been devised for arresting sparks; but the problem was beset with many difficulties owing to the ever-increasing power and speed of railway locomotives and the consequent additional strength of blast required. The passing of the Railway Fires Act, 1905, throwing an additional liability on the railway companies, seemed to have given further impetus to experiments with a view to the invention of really satisfactory spark arresters, though even now there was no general agreement between railway locomotive engineers, and the matter must still be regarded as in an experimental stage.

The authors then examined briefly some of the important cases which had decided the law on the subject up to the present time, and in conclusion they said: "The postponement of the date on which the Act came into operation to January 1, 1908, seemed only a fair compromise, for it has given the railway companies additional time to try still further mechanical means for preventing the emission of sparks, and for the invention of a really efficient spark arrester. Commenting generally on the Act, it seems that, as heretofore, farmers will have every inducement to take such precautions as would make the risk of fire as small as possible. This seems right and proper, but we venture to urge that it would not be altogether equitable if the Act should have the effect of making the railway companies liable for fires, in cases where they had, by means of increased compensation at the time of the acquisition of the land, paid for prospective damage by fire."

A discussion followed, and a hearty vote of thanks was accorded to the authors.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. H. P. Harris, Chairman, presiding.

Loans.—It was agreed to lend Hackney Borough Council 2,695*l.*, 14,000*l.*, and 2,450*l.* for street improvements and electric lighting purposes; Islington Borough Council 14,345*l.* for paving works; and Lewisham Borough Council 2,453*l.* for contribution towards cost of a street improvement.

Brixton-road Trams.—On the recommendation of the Highways Committee it was decided to approve of an expenditure of 27,160*l.* for the electrification of the tramway between Brixton-road and Camberwell-green, *viâ* Gresham-road and Coldharbour-lane. The sum includes 22,000*l.* for trackwork, 2,000*l.* for cables, cable-ducts, etc., and 3,160*l.* for overhead equipment. There will also be additional expenditure at later dates for rails, amounting to 4,600*l.*, and 3,150*l.* for rolling stock.

Schools.—The Education Committee submitted the following statement, showing the present position of the negotiations in respect of the non-provided schools:—

Schools closed or to be closed		79
Schools where the Council has decided that all requirements have been carried out to its satisfaction	107	
Schools where the architect (Education) has reported that all requirements have been carried out	20	
Schools where the managers have stated that the requirements have been carried out ...	76	300
Schools where the architect (Education) or the managers have stated that the work is nearly completed	97	
Schools where the work is in hand or is to be commenced shortly or where the matter is under consideration		57
Schools transferred to the Council or where the question of transfer is under consideration		6
School where the Council has granted an extension of time for completion		37
Total		459

Extension of London County Council School of Building, Brixton.—It was agreed that the estimate of expenditure on capital account of 3,670*l.*, submitted by the Finance Committee, in respect of the heating and electrical work in connexion with the extension of the London County Council School of Building, Brixton, be approved.

Lighting by Electricity Secondary Schools.—It was agreed that the supplemental estimates of expenditure on capital account of 345*l.* and 492*l.*, submitted by the Finance Committee in respect of the lighting by electricity of, and the provision of electrically-driven fans at the Dawes-road (Fulham) and Hortensia-road (Chelsea) secondary schools respectively, be approved.

Tenders—Invitation to Works Committee.—The Education Committee reported as follows:—

"Tenders for the erection of new schools and for works to existing schools are, as a general rule, invited from contractors on the Council's selected list. We are of opinion that, in all future cases, the Works Committee should be given an opportunity of submitting a sealed estimate, to be considered concurrently with the tenders. We therefore recommend: (*a*) That the operation of standing order No. B 167 be suspended in order that the following recommendation (*b*) may be dealt with; (*b*) that when tenders are invited, up to March 31, 1908, for the erection of a school and for any works to an existing school, the Works Committee be authorised to submit a sealed estimate of the cost, such estimate to be prepared, delivered, and dealt with in the same manner as, and concurrently with, the tenders."

The recommendations were agreed to.

Selected List of Contractors.—It was agreed that the name of Mr. H. Kent be added to the selected list of contractors to be invited to tender for enlargements, structural alterations, repairs to buildings, cleaning and painting, for works not exceeding 5,000*l.* in value.

Brunswick Park, Camberwell.—It was agreed that the supplemental estimate of expenditure on capital account of 423*l.*, submitted by the Finance Committee in respect of a contribution towards the cost of the acquisition by the Camberwell Metropolitan Borough Council of land, now known as Brunswick Park, Camberwell, for the purposes of a public open space, be approved.

Golf Course, Hainault Forest.—It was agreed that the estimate of expenditure on capital account of 550*l.*, submitted by the Finance Committee in respect of the formation of a golf course at Hainault Forest, be approved.

Displacement of Population, 1908.—The Parliamentary Committee reported as follows:—"We have had before us a return, prepared by the statistical officer, showing the probable displacement of population in London through the proposed acquisition of houses in connexion with the various Bills deposited in the present session of Parliament. This return shows that out of a total of 2,655 persons to be displaced, 2,023 are of the working class; and that of 679 tenements proposed to be acquired, 513 tenements are occupied by persons of the working class. The Housing of the Working Classes Act, 1903, requires rehousing accommodation to be provided where as many as thirty persons of the labouring class are displaced in the Administrative County of London under the provisions of any Bill. Prior to that Act the limit below which rehousing was not required was twenty houses in any metropolitan borough. The only Bill of the present session involving displacement without any obligation to rehouse is the Council's Tramways and Improvements Bill. In accordance with the usual practice, we have given instructions for a copy of the return to be sent to each member of the Council."

Smoke Nuisance.—Since December 13, 1907, the Council's inspectors have reported forty-two instances of nuisance from black smoke from trade premises, and particulars have been forwarded to the metropolitan borough councils concerned, with a view to action being taken for the suppression of the nuisance. Three cases of nuisance from railway locomotives were reported, but were not of a sufficiently serious nature to call for legal proceedings.

New County Hall.—Mr. R. A. Robinson, the Chairman of the Establishments Committee, in reply to questions, said he hoped to have a model of the proposed new county hall made when the present plans had been somewhat modified. No date had yet been fixed for coming to a decision as to the commencement of building operations.

Council and Commonwealth.—Sir Clement Kinlock Cooke asked the Chairman of the Improvements Committee whether, in view of the comments which had appeared in the Australian Press, and the obvious desirability of securing the Commonwealth of Australia as the tenant for the Aldwych site, he would furnish the Council with the terms of the offer made by the Commonwealth, and state if these terms had been accepted, and, if not, why not.

Lord Elcho, the Chairman of the Committee, in reply, said the paragraph in the Australian Press was headed "Shylock Demands by the London County Council," but he was glad to say he had authority from Captain Collins, a representative of the Australian Government in London, for saying that the paragraph need not be taken as official. The Committee had done everything to meet the Commonwealth, but no serious advance had been made on the previous offer. The Committee had let land to the Victorian Government, and they were willing to let land to the Commonwealth Government at the same proportionate price. The Committee had come to the conclusion that the Commonwealth were not serious in the matter, although the Committee were still anxious to secure them and would not close the door, but they no longer felt that they should keep off other people who were willing to negotiate. The Committee were determined not to let the land go at less than its proper value.

Draught Screens for Roof Covers.—It was agreed that the estimate of expenditure on capital account of 2,984*l.*, in respect of new work in connexion with the fitting of draught screens to the roof covers of 373 of the Council's existing double-deck electric tramcars, be approved.

Housing and Acquisition of Land.—It was agreed that, subject to Parliamentary authority being obtained for the application of the Acquisition of Lands (Part III.) Fund towards the development of estates already acquired by the Council under Part III. of the Housing of the Working Classes Act, 1890, any portion of such fund which is applied in pursuance of such authority be made subject to a charge for interest equal to the cost of the capital moneys in question when raised for the Westminster improvement, and to a sinking fund charge on the usual basis, and that the surplus accruing annually be credited to the Housing (Part III.) account in diminution of any charge upon the rates arising, or which shall have arisen, thereunder.

The Council adjourned soon after seven o'clock.

APPLICATIONS UNDER THE LONDON BUILDING ACT, 1894.

THE London County Council at their meeting on Tuesday dealt with the following applications under the London Building Act, 1894. The names of applicants are given between parentheses:—

Lines of Frontage and Projections.

Bermondsey.—A deviation from the plan approved for the erection of buildings on the south-eastern side of Upper Grange-road, Bermondsey, upon the site of No. 71, and on the north-eastern side of Lynton-road, so far as relates to the erection of two bay windows upon the Lynton-road frontage (Mr. T. Sloman).—Consent.

Camberwell, North.—Retention of bay windows at Nos. 8 and 9, Brief-street, Camberwell (Messrs. P. Arundell & Sons).—Consent.

Greenwich.—Iron and glass canopies over the doorways of five proposed houses between Nos. 21 and 27, Wellington-road, Old Charlton (Mr. J. Rowland for Mr. H. W. Budd).—Consent.

Lewisham.—The retention of a projecting balcony and sham half-timber work in front of the "Black Bull" public-house, No. 316, High-street, Lewisham (Mr. H. Knight for Mr. D. Bartlett).—Consent.

Marylebone, East.—A studio and caretaker's dwelling in the grounds of Grove House, to abut upon the eastern side of Albert-road, St. Marylebone (Mr. J. Tatchell for Mr. S. Goetze).—Consent.

St. George, Hanover-square.—Refacing of the front of No. 74, South Audley-street, St. George, Hanover-square, and the extension of the existing balcony (Messrs. Balfour & Turner for Sir W. Cuthbert Quilter, Bart.).—Consent.

Wandsworth.—A church and presbytery on the north-eastern side of Ellison-road, Wandsworth (the further application of Mr. J. H. Beart-Foss for the Very Rev. Canon St. John).—Consent.

Woolwich.—A building on the western side of Charlotte-street, Woolwich (Mr. J. E. Edwards for Mr. H. Hart).—Consent.

Bermondsey.—A building, with a one-story shop in front, on the eastern side of Upper Grange-road, Bermondsey, immediately northward of Lynton-road (Mr. T. Sloman).—Refused.

Lewisham.—Three houses on the western side of Ardgowan-road, Catford, with the southernmost house to abut upon the northern side of Sandhurst-road (Mr. R. Stewart for Mr. A. Cameron Corbet, M.P.).—Refused.

Wandsworth.—A one-story shop at No. 74, Caistor-road, Balham (Mr. J. H. Beare).—Refused.

Westminster.—A smith's shop and plant store at the premises of Messrs. Allen & Co., Pimlico Wharf, Grosvenor-road, Westminster (Messrs. Allen & Co.).—Refused.

Width of Way.

City of London.—A building upon the sites of Nos. 12, 13, and 14, Half Moon-passage, City, at less than the prescribed distance from the centre of the roadway of such street (Mr. H. Wright for Mr. G. Chase).—Consent.

Wandsworth.—A one-story stable building at the rear of No. 46, Blackshaw-road, Wandsworth, at less than the prescribed distance from the centre of the footway leading from Blackshaw-road to Kenlor-road (Mr. W. G. Lawrance).—Consent.

Westminster.—Iron railings at the rear of No. 62, Victoria-street, Westminster, at less than the prescribed distance from the centre of the roadway of Brewer's Green-mews, and also abutting upon the western side of Spencer-street (Mr. J. T. Helby).—Consent.

Whitechapel.—A building between Nos. 207 and 211, Cable-street, Whitechapel, at less than the prescribed distance from the centre of the roadway of the street (Mr. B. J. Capell for Messrs. Sly, Dibble, & Co.).—Consent.

Width of Way and Frontage.

St. Pancras, North.—A one-story addition at the premises of C. Ash, Sons, & Co. (1905), Ltd., on the south-eastern side of Anglers'-lane, Kentish Town (Mr. A. J. Perriam for C. Ash, Sons, & Co. (1905), Ltd.).—Refused.

St. Pancras, South.—An iron enclosure at the flank of No. 24, Harrison-street, St. Pancras, abutting upon the eastern side of Seaford-street (Mr. J. E. Yerbury for the Lyle Trading and Manufacturing Company, Ltd.).—Refused.

Line of Frontage and Construction.

Wandsworth.†—The retention of a showcase and signboard of a temporary character in front of No. 125, Balham-hill, Wandsworth (Mr. H. M. Franklin).—Consent.

Width of Way and Construction.

Dulwich.—The retention of a wood and iron van-shed at the rear of No. 87, Camberwell-grove, Camberwell (Messrs. J. F. Chiverall & Co.).—Refused.

Space at Rear.

Bermondsey.—A modification of the provisions of sect. 41 with regard to open spaces about buildings, so far as relates to the proposed erection of an addition over the space at the rear of a building on the eastern side of Upper Grange-road, Bermondsey, immediately northward of Lynton-road (Mr. T. Sloman).—Consent.

Bermondsey.—A deviation from the plans approved for the erection of buildings on the south-eastern side of Tower Bridge-road, Bermondsey, so far as relates to an alteration in the space at the rear of the two northernmost buildings (Messrs. Thompson Brothers).—Consent.

Formation of Streets.

Hackney, North.—That the Council do accede to the request of Mr. H. C. Foulkes that further proceedings shall not be taken against him in respect of the commencement to form and lay out a street for carriage traffic leading out of the north-eastern side of Carysfort-road, Stoke Newington (on certain conditions).—Consent.

Wandsworth.—The retention of barriers across Broadwater-road and Khama-street, Garratt-lane, Tooting (Messrs. Grundy, Izod, & Co.).—Consent.

Bow and Bromley.—A deviation from the plan approved for the formation or laying out of new streets for carriage traffic upon the Grove Hall Estate, Fairfield-road, Bow, so far as relates to the proposed omission of the southernmost street and portions of streets Nos. 2 and 4 (Mr. E. Evans).—Refused.

Greenwich.—That an order be issued to Mr. A. Roberts refusing to sanction the formation or laying out of new streets for carriage traffic out of the northern side of Woolwich-road, and the widening of Lombard-road in connexion therewith (Mr. E. T. Fysh).—Refused.

Buildings for the Supply of Electricity.

Woolwich.—Certain alterations in the construction of the electric light station, Globe-lane, Woolwich (Mr. G. W. Keats for the Woolwich Borough Council).—Consent.

Alteration of Buildings.

City of London.—A modification of the provisions of sect. 77 of the Act, so far as relates to the uniting of Nos. 30 and 31, Bouverie-street, City, and to the formation of openings between No. 30, Bouverie-street and Nos. 9 and 10, Whitefriars-street (Mr. E. R. Hewitt for the "News of the World" Newspaper Company, Ltd.).—Consent.

The recommendation marked † is contrary to the views of the local authority concerned.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

ARCHITECTS AND THE PREVENTION OF CORRUPTION ACT, 1906.

Counsel's Opinion.

WE take the following from the last issue of the *Journal* of the Royal Institute of British Architects:—

The following questions on points affecting architects in relation to the Corrupt Practices Act, 1906, were formulated by a firm of solicitors acting under the instructions of Mr. J. Alfred Gotch, of Kettering, and were submitted by the Council of the Institute for the opinion of Mr. W. O. Danckwerts, K.C. Mr. Gotch states that his aim was to have the case presented mainly from the point of view of the country architect. The learned counsel's opinion, which bears date July 12, 1907, is appended below printed in italics.

QUESTION 1.—Does an architect by acting also as quantity surveyor, and being paid by the contractor as stated in the summary without having informed the building owner, render himself liable to prosecution under the Prevention of Corruption Act, 1906?

ANSWER.—*He does not. In order that an offence may be committed the thing must be done corruptly, and merely doing honestly what is indicated by the question is not corrupt.*

QUESTION 2.—Does an architect, acting also as quantity surveyor, who puts into the bill of quantities without informing the building owner a sum of money to be paid to him by the contractor for printers' and lithographers' charges for printing the bill of quantities render himself liable to prosecution under the Act?

ANSWER.—*The same answer applies to this question as to question* 1.

QUESTION 3.—Does an architect, acting also as quantity surveyor, by charging remuneration for revising the bill of quantities where there is a variation in the works without informing the building owner render himself liable under the Act?

ANSWER.—*The same answer applies to this question as to question* 1.

QUESTION 4.—Does an architect who puts in the bill of quantities a sum of money to be paid to him by the contractor for copies of drawings other than the first set without informing the building owner render himself similarly liable?

ANSWER.—*The answer applies here also. But I should point out that under the forms herewith the cost of these should be borne by the builder.*

In my opinion the system of charging the employer through the builder for bills of quantities is not a commendable one, because it is calculated to mislead the employer, if not to conceal the fact of payment from him. The better practice would be for the architect to get his pay direct from the employer.

Eighth International Congress of Architects, Vienna.

The programme of the Congress to be held in Vienna from May 18 to 24 next, under the auspices of the Austrian Committee and the leading architectural societies in Vienna, has been received, and steps are being taken by the Institute for the distribution of copies among the architects of the United Kingdom. The organisation and general arrangements are much on the lines of the London meeting of the Congress in 1906. The subscription for members is 25 kronen (a krone being equivalent to about a franc) for lady members, 15 kronen.

Members of the Congress are invited to the official opening in the Imperial and Royal Castle, to the *fête* given by the Imperial Court, to the municipal reception at the Town Hall, to the "rout" at the Kunstlerhaus, and to the evening banquet at the Kahlenberg to be given by the Austrian Society of Civil Engineers and Architects; also to the official opening of the International Architectural Exhibition. Members will have the right of attending the various visits and excursions and the farewell banquet on payment of the necessary charges.

The following subjects will be submitted for deliberation:—

1. Regulation of the Cultivation of Art by the State. The Executive Committee propose to move: "That State administrations should be urgently requested to establish special Secretaries of State, or at least suitable departments, for the fine arts. Prominent artists should be associated with these secretaries or departments. As architecture must be regarded as the leader of the fine arts, architects should be represented on these bodies in the majority. The duty of the secretaries or departments should be the promotion and care of the fine arts in every branch."
2. Architectural Copyright and the Ownership of Drawings.
3. Regulation of International Architectural Competitions. The Permanent Committee will present a report on this subject.
4. Legal Qualifications and Government Certifying of Architects.
5. Conservation of Public Architectural Monuments.
6. Concerning Reinforced Concrete Buildings.

The Executive Committee invite written expressions of opinion with regard to the resolution concerning Subject I.—either short communications indicating acquiescence or more detailed papers—by March 15 at latest. At the first principal meeting of the Congress the result of these opinions will be brought forward and discussed.

A referee is to be appointed for each of the remaining subjects with a view to presenting to the Congress a uniform digest of the papers sent in.

The following lectures will be delivered:—

1. The Influence of Modern Art in the Sphere of Architecture, by Karl König.
2. The Influence of the Historic Styles of Architecture on the Development of New Styles, by Leopold Bauer.
3. The Building Laws of Berlin, London, Paris, Rome, and Vienna, and their influence on the architectural form of dwelling-houses and the appearance of the city, by Karl Mayreder.
4. The Photometric Survey of Architectural Monuments, by Dr. A. Meydenbauer.
5. The Architect's Copyright in his Designs, by Dr. Sandor Eros.
6. Town Planning in Germany in the Middle Ages and at the Present time, by Bodo Ebhard.

Papers submitted to the Congress must be in either German, English, French, or Italian. The abstracts will be given in all four languages.

An International Architectural Exhibition will be opened in the "Gartenbau-Gesellschaft" in the city, and will be accessible to the public for four weeks from the opening of the Congress. Members will have the right of free admission.

The President of the Congress is Herr Otto Wagner, and the Secretary Herr F. F. von Krauss, of Eschenbachgasse 9, Vienna I.

Architectural Societies.

MANCHESTER SOCIETY OF ARCHITECTS.—The eighth general meeting of this Society was held at the Society's rooms on the 4th inst., when a paper was read by Mr. L. M. Angus, B.A., the subject being "Towers and Spires." Mr. Paul Ogden, President of the Society, was in the chair. Mr. Angus treated the subject from the point of view of exterior grouping rather than of individual design. The development of the tower was traced from early Romanesque to the culminating churches of the Middle Rhine, on the one hand, and of Normandy and the Royal Domain on the other. Passing to England, the lecturer illustrated the universal use of the central tower in the cathedrals, and briefly touched upon the towers and spires of our lesser churches. An interesting discussion followed the paper.

GLASGOW INSTITUTE OF ARCHITECTS.—The amalgamation of the Glasgow Institute of Architects and the Architectural Association was celebrated on the 4th inst. at a dinner in Grosvenor Restaurant, which was attended by a company numbering upwards of 100. Mr. James M. Munro (President of the Institute) presided, and among others present were Sir John Stirling-Maxwell, Principal MacAlister, Professor Glaister, Dr. William Wallace, Deacon-Convener Macdonald, Mr. Fra. H. Newbery, Mr. A. B. M'Donald, Mr. G. B. Walker, Mr. Wm. M'Lean, Mr. Thomas Nisbet, Mr. John Keppie, Dr. John Honeyman, Mr. P. F. Dunn, Mr. A. Wingate, Mr. Hippolyte J. Blanc, Mr. Edgar Barratt, Mr. J. B. Wilson, Mr. James Lochhead, and Mr. George Bell (croupier). Mr. George Bell, in proposing the "Corporation of Glasgow," paid a tribute to the value of the committee work done in the Corporation. Deacon-Convener Macdonald replied. Dr. Wallace proposed "Science and Art." Why, he asked should science and art be separated from architecture? So far as his knowledge went, architecture was that art which was science, and that science which was art. The term science and art suggested to him one idea—South Kensington, where science and art were united by the golden bridge of grants. He was not quite certain what was exactly the definition between science and art nowadays, but he was reminded of Ruskin's definition of art, "every work of art either suggests a true thing, or at least a serviceable thing." On the other hand, he had read in a great scientific authority that science was the co-relation of all knowledge—to know truth in its relation to other truths was to know it scientifically. He was so much of a layman that he did not understand the difference between the two propositions; but he thought it meant that science and art, which at one time were very much at war—as Church and State, or as the ins and outs of politics were—were now at peace. The speaker went on to refer to the need for closer union between the School of Art and the University. What form that connexion might take he did not presume to say, but he had no doubt that some means could be devised by which the School of Art, and indeed all the artistic institutions, including the Institute of Architects, could be brought more closely into touch with the University. Principal MacAlister, in the course of his reply, said that architects knew the value of science. They also knew its proper place, and put it there. It furnished them with their raw material and with the mechanical principles of their art. Sometimes it also furnished them with problems, and he was sure it often acted as a stimulus to new departures. In like manner the philologist, the maker of dictionaries, the psychologist, the anthropologist, and the historian served the purpose of the poet. Science was the architect's minister, not his master. He took hold of her laws and interwove them with his own higher or super-laws, and he employed the results of science, which they in the University and elsewhere were concerned in elaborating, just as the poet employed the labours of the dictionary-maker, the philologist, and the historian. He shaped out of them a new thing, which was not in themselves, which they had to name by words unknown to science, but which names represented the real things—the deep-seated realities, immaterial but essential, such as grace, grandeur, dignity and beauty. That was what architecture evolved out of the raw material which science provided. The ideal of every architect, like the ideal of the poet, was that some day he might compose a poem, even if it be in stone. Mr. F. H. Newbery, who also replied, said that the Glasgow School of Art was accomplishing great work in educating the community. No one more ardently desired union with the University than he did. They wanted to educate men to realise their opportunities. Sir John Stirling-Maxwell proposed "The Glasgow Institute of Architects." He said he believed that architecture more than any of the arts required a strong centre, a fortress where the traditions of the art could be cultivated and preserved and handed on, because he did not think it was possible for any one man, or even one generation, to effect a revival after the good traditions were lost. The object of that Institute was to enable members to protect themselves, and to encourage the science of architecture. He was very glad that the scence was there as well as the art. There might also however have been another word—the business of architecture. He thought they suffered too much in Glasgow from the chasm which had lain too long between architecture and engineering; and in respect of that particular loss, which he thought was a great loss to the profession, he believed they suffered more in Glasgow than other great cities in Europe. They suffered from a search after novelty, which was perhaps carried to excess. Sir John went on to say that the parallel between architecture and literature alluded to by Principal MacAlister might be carried to considerable lengths. Pedantry, for instance, was equally distasteful in the one as in the other. He thought an interesting comparison might be made between the literature and the architecture of the XVIth century and the literature and the architecture of the XVIIIth century. It would be found that the same kind of scholarship and freedom which were found in the literature of the XVIth century were also found in its delightful architecture. In the same way in the XVIIIth century, which was largely infected with pedantry, they would find too much pedantry in architecture as well as in writing. The President, in replying, said that during the past forty years the Institute claimed to have advanced the art of architecture in its truest interests, and the progress in the development of the city and urban districts was a proof of the fruit of their endeavour to leave their mark upon the passing age. They hoped that the amalgamation which they were celebrating that night would strengthen their organisation, not only in numbers but in sympathy and attainments. Mr. A. Wingate (President of the Associate Section) also acknowledged the toast. Mr. James Lochhead proposed "Kindred Societies," and Mr. Hippolyte J. Blanc responded.

NORTHERN ARCHITECTURAL ASSOCIATION.—Upwards of 150 members of this Association and friends attended a conversazione held on the 5th inst. in the Grand Assembly Rooms, Newcastle. Among those who had accepted invitations were the President (Mr. A. B. Plummer), Messrs. J. Oswald, G. O. Brown (Sunderland), H. G. Badenoch, J. Bruce, J. G. Burrell (Durham), H. C. Charlewood, J. W. Taylor, R. B. Dick, J. M. Dingle (South Shields), F. E. Dotchin, F. M. Dryden, J. Hall (Sunderland), H. O. Hedley (Sunderland), J. J. Hill, D. Hill, W. T. Jones, C. S. Errington (hon. secretary), J. C. Maxwell, W. Milburn (Sunderland), T. R. Milburn (Sunderland), J. L. Nicholson, C. J. Pringle, M. Reed, C. Walker, C. S. Shortt, W. L. Newcombe, J. P. Allen, R. Hedley, R.B.A., W. Lowry, C. B. Stevenson, H. Chapman, W. J. C. Coulson, J. E. Dryden, H. W. Featherstone, C. I. Greenhow, F. Haswell, H. L. Hicks, V. Middleton, W. W. Oliver, T. V. Rayne, R. P. S. Twizell, A. K. Tasker, F. N. Heightman, H. A. Wilson, and F. H. Lawson. Sketches in pencil and pen-and-ink, as well as water-colours, by members, were on view. On the front page of the programme was a sketch of St. Nicholas' Cathedral, Newcastle, specially prepared by Mr. R. Mauchlen.

ABERDEEN ARCHITECTURAL ASSOCIATION.—A meeting of the Aberdeen Architectural Association was held on the 1st inst. in Gray's School of Art, when Mr. R. Gordon Nicol, Harbour Engineer, delivered a lecture on "Building Mortars." The chair was occupied by the President, Mr. J. B. Nicol, who introduced the lecturer as one who had made a special study of the subject of mortars and cements. Mr. Nicol opened his lecture by referring to the building work of the early architects, remaking that, had it not been for splendid stone-work and mortars they employed in their buildings, fewer of these masterpieces would have survived at the present time. He classified the chief cementing materials used for mortar at the present day as pure limes, hydraulic limes, and cements, the term hydraulic being applied to a lime that sets or hardens under water as well as in the atmosphere. He showed by their chemical composition that caustic lime was the chief ingredient in each variety, but those which contained a percentage of clay in their composition before calcination or burning, possessed in a greater or less degree hydraulic properties, and produced the best and strongest mortars for building purposes. Common mortar was the mixture of a pure lime with sand. It hardened by the absorption of carbon dioxide from the atmosphere, with formation of carbonate of lime, the process of hardening being one of crystallisation. Having little or no hydraulicity it was unsuitable for damp situations and foundations, and as the atmosphere rarely got access to the interior of the masonry, it remained soft or merely dried without cementing value. The hydraulic mortars, on the other hand, had within themselves the whole of the ingredients necessary for crystallisation, and set hard in any situation. The limes that were sold in Aberdeen were high in caustic lime, and Mr. Nicol recommended that these should be increased in hydraulicity by the addition of Portland cement to the lime mortar, immediately before use in the masonry. The lime mortar in Aberdeen was usually made in the proportions of one measure of lime to two or three measures of sand, and such mortar if mixed with a small percentage of cement showed great strength in a few days, where the mortar alone had little or no strength for a long period. The lecture was illustrated throughout by lantern slides, and at the conclusion a hearty vote of thanks was awarded the lecturer.

THE STUDENT'S COLUMN.—Our Student's Column article ("Reinforced Concrete Beam Formulæ") is unavoidably held over until next week.

LIFE OF FERRO-CONCRETE BUILDINGS.—Mr. Horniman, M.P., asked the Chief Commissioner of Works in Wednesday's Parliamentary papers what is the estimated life of buildings in reinforced or ferro-concrete such as is now being erected for the Post Office in the City; whether he has any report of how this kind of construction resists the effects of fire; and has he seen any reports or publications respecting the buildings so constructed after undergoing the test of fire at San Francisco.—Mr. Harcourt replies that buildings of ferro-concrete are believed by experts to be at least as durable as those of brick or stone. He had received a very valuable report confirming this opinion on the subject from the Joint Committee of the Royal Institute of British Architects. The experience of San Francisco, though interesting, is not of conclusive value, as the buildings there were subjected to earthquake fracture before the occurrence of fire.

BOOKS RECEIVED.

PATENT RIGHTS: NOTES ON THE PROCEDURE FOR THEIR ACQUISITION AND MAINTENANCE. By G. G. Melhuish Hardingham, A.M.Inst.C.E. (Crosby Lockwood & Co.)

STATISTICS OF PUBLIC EDUCATION IN ENGLAND AND WALES: 1905-6-7. (Wyman & Sons. 2s.)

A DIGEST OF LAW AND ARBITRATION CASES. By Sydney Wright, M.A. (*Estates Gazette* office. 10s.)

Correspondence.

BUILDING TRADES EXHIBITION, OLYMPIA, 1909.

SIR,—In view of the length of the letter from Messrs. Smith & Bridges appearing in your issue of the 8th inst., I regret to have to further trespass—although for the last time in this connexion—upon your valuable space. I think, however, you will agree with me that certain of the points raised demand, in justice alike to myself and the building trades, a reply.

Your correspondents deny that their forthcoming exhibition is "on similar lines" to mine, yet they confessedly make "building" part of their title on the ground that "it is so closely and intimately connected with municipal work," and also use the words "Municipal and Public Health," which, as is well known, are sections covered by my exhibition. Theirs are distinctions without a difference. In any event, whether their municipal exhibition is a building trades exhibition in whole or in part or not at all, the fact remains that exhibitors of mine in the general as well as in the municipal and public health sections have been actually canvassed. I am therefore bound to make it quite clear that my exhibition at Olympia, 1909, must not be confused with the projected exhibition at the Agricultural Hall. That such confusion occurs is evident from letters I am constantly receiving, the latest, under date of February 6, stating:—

"This firm, I suppose, wrote me a few days ago, and I, perhaps without sufficient consideration, took it to be your exhibition."

H. GREVILLE MONTGOMERY.

*** We cannot publish any further letters on this subject.—ED.

COUNTY COUNCIL LIST OF FIRMS.

SIR,—We noticed in your last issue reporting the proceedings of the London County Council, the statement that our name has been removed from the list of firms selected to tender for heating Council schools.

As an unqualified statement of this kind is likely to injure us, will you kindly allow us to explain that the resolution was adopted in response to our written request to the architect of the department.

JOHN JEFFREYS & CO.

*** The statement was not ours; it was merely copied from the London County Council agenda paper.—ED.

CORRECTION.—Messrs. Hammond & Champness ask us to state that their address is Alfreton-street, Old Kent-road, S.E., not Alfreton-street, *Deptford*, as stated in the report of the London County Council in our last issue. The mistake was not ours.

THE MUNICIPAL YEAR BOOK.—The Municipal Year Book for 1908 (edited by Mr. R. Donald, and published by Edward Lloyd, Ltd., Salisbury-square, 7s. 6d. net) has just been issued. The work is increasing in size, and it now contains over 900 pages—300 more than its immediate predecessor—of very useful and, as far as we have tested it, reliable matter, set out in a convenient and condensed form. The work, which is provided with a good index, is divided into twenty-five sections. The new sections include those devoted to minor local government bodies such as burial, harbour, dock and pier, port sanitary, joint hospital, and joint water and gas authorities; a digest of leading cases, and the text of the Acts of Parliament affecting local government that were passed in the session of 1907; the report of the Departmental Committee on Local Accounts; and a "Labour" section, which incorporates specimen "fair wages" clauses in corporation contracts, tables showing the wage and labour conditions of various classes of municipal employees, etc. The "Municipal Trading" section is considerably extended, and in the housing section will be found some information respecting town planning. As for the general scheme of the book, a brief review is given of the work of each local authority in alphabetical order, under the name of the city, town, or district, and, wherever possible, the statistical and other information is arranged in a series of sections in tabular form.

WESTMINSTER CITY COUNCIL.

AT the fortnightly meeting of the Westminster City Council on Thursday in last week the following matters, amongst others, were dealt with:—

Piccadilly.—It was decided to form an additional refuge in Piccadilly near the Ritz Hotel.

Paving Works.—The Works Committee reported on the paving and repaving works which they suggested should be carried out during the ensuing year, and they recommended that the following streets, of the total area of which 2,800 sq. yds. are in red gum wood, 2,600 sq. yds. are in jarrah wood, 4,400 sq. yds. are in macadam, and 1,100 sq. yds. are in granite setts, be paved or repaved, as the case may be, the cost to be met out of the Paving Renewal Fund; that tenders be obtained for paving the streets with wood, asphalt, or other paving material; and that, with the exception of Eaton-lane and Princes-row, which they proposed should be repaved with asphalt, the selection of the material to be used in each case be deferred until after tenders for the work were received:—(*a*) Eaton-lane (estimated cost 260*l.*); (*b*) Grosvenor-road, Messrs. Mowlem's premises to Bulinga-street (1,400*l.*); (*c*) James-street, Covent Garden (750*l.*); (*d*) Northumberland-avenue, Villiers-street to Embankment (800*l.*); (*e*) Northumberland-avenue, adjoining Whitehall-place (500*l.*); (*f*) Princes-row (400*l.*); (*g*) St. George's-road, Elizabeth Bridge to Warwick-street (2,200*l.*).

Considerable discussion took place over a proposal in the list to the repaving of Grosvenor-square with wood, and this was eventually carried.

Princes-street Widening.—The question of widening Princes-street, which has been several times before the Council at the instance of Sir J. Wolfe Barry and others, was again reported upon in consequence of a letter from the Institution of Civil Engineers urging the Council to take immediate steps to secure the widening on the lines recommended by the Royal Commission on London Traffic. The Institution pointed out that it is expected that the Government will shortly widen the northern end of Princes-street in connexion with the site to be provided for the new building of the Institution of Civil Engineers, but that at the southern end of Princes-street such improvement will be rendered impracticable if a large building for a Wesleyan conference hall, the foundations of which are now being laid, is not considerably set back from the present frontage line, and that it is believed that it is intended to construct this building in such a way as to leave a width of street of less than 30 ft. opposite to the Westminster Hospital. The Improvements Committee recommended that, if the London County Council would carry out the improvement, the City Council would put in force their powers under Michael Angelo Taylor's Act, and would contribute a sum not exceeding 5,000*l.* towards the cost.

INTERNATIONAL CONGRESS OF DRAWING AND ART TEACHING.

A MEETING took place on Wednesday afternoon at the Mansion House in support of the third international congress for the development of drawing and art teaching and their application to industries, which is to be held in London in August. The Lord Mayor, who was accompanied by the Lady Mayoress, presided, and among those present were the Duke of Marlborough, Lord Avebury, Sir A. Rollit, Sir John Gorst, Sir L. Alma-Tadema, R.A., Mr. Alfred East, A.R.A., Mr. Frank Short, A.R.A., and Professor Lethaby.—Mr. C. M. Mathews (Organising Secretary) read a number of letters from those unable to attend.—Professor Beresford Pite made an explanatory statement, in which he said that the first of those international congresses for the development of drawing was held in Paris in 1900, in connexion with the great exhibition, and the second at Berne in 1904. The organisation of the congress was entrusted to a body called the International Federation of Instruction in Drawing, which had decided that the congress this year should take place in London, and the movement had been entrusted to a British committee nominated in connexion with the international federation. The congress gathered together representatives interested in the teaching of drawing from all the nations of the civilised world. Twenty-two nations were separately represented by delegations at the congress at Berne, and that number had very considerably grown in view of the congress in London. The number of members attending at Berne was some 800. The nations of the world had organised the teaching of art drawing. They had drawn up a programme for the consideration of this great subject, they were about to concentrate in London, and the British members were anxious that London should not be left entirely ignorant of the aims and objects of the congress and entirely unprepared to welcome such an important delegation on such an important occasion. A large committee had been formed, called the British committee, for the purpose of associating together teachers and professors of drawing with a view to the preparation of the work and programme of the congress. A great exhibition was to be held in connexion with the congress in August. It would not be an exhibition of pictures, but of the methods and aims of those engaged in teaching drawing. It would, to a very large extent, be of great importance to teachers as well as to learners, and would take place at South Kensington. A very important matter was the raising of funds for the work of organisation and for the work of the exhibition. They were bound to make a wide and large appeal to the public, as the international committee had fixed the membership fee of the congress at 10s. 6d., and that fee would not provide the financial support needed. The British committee would like to urge the great importance of art teaching to general education as well as to special purposes, and on those grounds to make a strong plea for the support of corporations and public bodies interested in national progress. Throughout the primary schools of the United Kingdom, containing some 6,000,000 children or more, drawing was taught; it was also taught throughout the secondary schools of the country; and there were great art schools and institutes where the purposes of drawing had to be considered. He thought, therefore, that they would see how very large was the area to which they had a right to appeal, and how important were the interests involved in that subject. There was no reason why England should be in any way behind the Continental nations in the matter of interest in the teaching of drawing.—Lord Carlisle moved:—"That it is desirable that the third International Congress for the Development of Drawing and Art Teaching and their Application to Industries should be received in London in a manner worthy of the traditional reputation of Great Britain for hospitality and international courtesy."—Lord Avebury seconded the resolution, and said that, looking at the matter from the educational point of view, he would place the teaching of art as only second, if indeed it were second, to the teaching of writing in our schools. Art, indeed, trained the eye through the mind, and the mind through the eye, and it was of the greatest possible importance in enabling us to appreciate the beauties of nature by which we were surrounded. We were rather apt to think that those who were unfortunately blind were exceptional in that deprivation, but he was afraid that, though we most of us thought we could see, the real fact was that very few of us saw half of what we ought to see; and that was rather indicated in our language, because when we spoke of overlooking anything we did not mean that we saw it, but, on the contrary, that we did not see it. In conclusion, Lord Avebury quoted from Lord Leighton to the effect that competition in certain industries no longer ran mainly on the lines of excellence of material and solidity of workmanship, but nowadays greatly on artistic form and beauty of design.—The resolution was carried.—Sir L. Alma-Tadema moved:—"That as the revenues of the State cannot be applied for this purpose, application should be made to local authorities, public bodies, and private citizens to provide such funds as are requisite."—The Duke of Marlborough seconded the resolution, which was carried.—Sir J. Gorst moved a vote of thanks to the Lord Mayor, which was seconded by Mr. T. A. Sykes and heartily accorded, and the Lord Mayor replied.

HALL, EBBW VALE.—A new workman's hall is in course of construction from the designs of Mr. H. Waters. The contractor is Mr. Morgan. The fire-resisting floors and staircases are being supplied and fixed by Messrs. Mark Fawcett & Co., of Westminster.

MANCHESTER BUILDING AND ALLIED TRADES' EXHIBITION.—The fifth Building and Allied Trades' Exhibition will be conducted on similar lines to the last one held under the same management during 1906, but the scope will, it is stated, be extended. A section will be devoted to the sanitary branch of the trade, and the support of several important firms has, we are informed, been promised. The exhibition is under the direct patronage of the building and allied trades of the district, and the following are some of the features:—The exhibitors will form the Exhibition Committee; an office will be set apart for the use of the City, Town, and Local Board Surveyors and Chief Engineers; a section will be devoted to the display of architectural drawings and plans. The exhibition will be held in St. James's Hall, and will open on Tuesday, March 3, at 3 o'clock, and close on March 14. Mr. Walter Cawood, St. James's Hall, Manchester, is manager.

Obituary.

MR. MOUNTFORD.—We greatly regret to announce the death, on Friday, February 7, at his residence, No. 11, Craven-hill, Lancaster Gate, W., of Mr. Edward William Mountford, in his 53rd year, of Norwich House, Southampton-street, W.C., and formerly of Wandsworth. Mr. Mountford was elected an Associate in 1881, and in 1890 a Fellow, of the Royal Institute of British Architects; he served as a member of the Council for 1896-7 and 1900-7, and of the Art Standing Committee for 1896-7 and 1900-5. In 1874 he was elected a member of the Architectural Association, of which he was President for 1893-4-5. He was the son of the late Mr. Edward Mountford, of Shipston-upon-Stour, Worcestershire, and, having had his earlier education at Clevedon, was articled when seventeen years of age to Messrs. Habershon & Pite, of Bloomsbury-square, W.C., architects. He started in independent practice in 1881; in last April he took his late chief assistant, Mr. F. Dare Clapham, into partnership. Mr. Mountford was awarded a silver medal at the Paris Exhibition, 1900; in May, 1901, he was elected a member, with sixteen other architects, of the advisory council for carrying out the scheme of the Architectural Association for the day classes of their School of Architecture; the London County Council nominated him in May, 1900, as one of the eight architects to furnish designs for buildings fronting the Strand and the crescent road at Aldwych—his designs were published in the *Builder* of November 10, 1900—and, in last autumn, as one of eight to submit designs in the final competition for the London County Hall, Lambeth. Of Mr. Mountford's chief architectural works the following have been illustrated, and with their plans, in our columns:—"Stonelands," Sussex, for Mr. W. F. Frank (August 27, 1887, exterior, interior, stables, etc.); the Club-house, Shipston-upon-Stour (September 10, 1887); St. Andrew's Church, Garratt-lane, Wandsworth (May 12, 1888); Battersea Free Library, Lavender-hill, in competition (December 8, 1888); Sheffield Town Hall and Municipal Buildings, in competition (June 28, 1890; June 20 and July 11, 1891; May 21, 1892; February 17, 1894; and February 13, August 7, and October 9, 1897), erected at a cost of some 100,000*l*., and for the extension of which, on the South-parade and Norfolk-street site, he was appointed architect in August, 1902; Battersea Polytechnic for 1,450 students (March 28, 1891, and July 23, 1892) and Battersea Town Hall (December 19, 1891; July 9, 1892 (staircase); and November 25, 1893)—those two buildings were opened by the King, when Prince of Wales, on February 24, 1894, and have since been enlarged by Mr. Mountford; St. Olave's Grammar School, Southwark (June 10, 1893); Northampton Institute, or City Polytechnic, Clerkenwell, 1894-8, in competition, with a hall to seat 1,500 people (April 15, 1893, view and plans; June 30, 1894, entrance and tower; and June 8, 1895), built by Mr. W. Wallis; St. Mary's Church, Summerstown, S.W. (September 15, 1894); new chancel, south chapel, and vestries, St. Anne's Church, Wandsworth, by Sir R. Smirke in 1824 (July 13, 1895); Orthopædic Hospital, Great Portland-street, W. (June 25, 1896); the Central Schools of Science, Technology, and Art, and Free Library, Liverpool, with additions to the Museum, for the Brown Library, Picton Reading-room, and Walker Art Gallery, in competition (August 8, 1896; January 2, 1897, revised design without the dome; May 27, 1899, west elevation of the Museum towards Byrom-street, July 15, 1899; and January 11, 1902, details of south front), covering a site of 2,900 sq. yds. on the west side of the Museum, and having an observatory for the use of the Nautical College; St. Michael's Church, Southfields, Wandsworth, for 1,740 sittings (July 24, 1897); the Manor House and the Mrs. Ellen Badger Memorial Hospital, Shipston-upon-Stour (October 23, 1897); the Government buildings, States of Guernsey, first premiated design, after the Classical style (May 13, 1899); Sessions House and Central Criminal Courts, Old Bailey, the first stone of which was laid on December 20, 1902, and a large model was made (June 30, 1900, as revised), in a competition limited to six; "Munstead Rough," near Godalming (August 17, 1901); No. 55, Cowcross-street, E.C., for Booth's Distillery Company (August 17, 1901); the Nurses' Home, for fifty nurses, as portion of the new Infirmary at Fir Vale, for the Sheffield Union Guardians (August 23, 1902); "Munstead Grange," Surrey, for Mr. W. Pullman (December 31, 1904); jointly with Mr. E. A. Gruning, the rebuilding in Lothbury and Moorgate-street, E.C., of the premises of the Northern Assurance Company (July 27, 1907); and the Town Hall, Lancaster (November 9, 1907), with a court-house and assembly-hall, and an annexe for the fire-brigade station, and men's quarters, and the Weights and Measures department. We have also illustrated the elevations and plans of his second premiated designs for the Chelsea Free Library (June 8, 1889), and of his third premiated designs for the Colchester Town Hall (September 18, 1897). Mr. Mountford was the architect of the Hospital, Alcester-road, Stratford-upon-Avon, 1883-4; the churches of St. Paul, Forest Hill, S.E. (jointly with Mr. H. A. Appleton), and St. Bartholomew, Battersea, 1991; the architectural portion, with pedestal of the Queen Victoria Memorial, Sheffield, 1903; the mission-hall, Dunt's-hill, and the new lecture-hall, East-hill, Wandsworth, 1890; a block of residential flats and business premises, Sloane-square, and an adjacent block of flats abutting on Sloane-gardens and Lower Sloane-street, 1903-4, jointly with Mr. A. F. Faulkner; extension of the Chelsea Polytechnic for the domestic economy department, 1903; a church in South-street, Wandsworth; the administrative block of the Fir Vale Workhouse Infirmary for the Sheffield Union Guardians, 1901-2; the new hall, 1898, together with the additions to the engineering department, Battersea Polytechnic, with drawing office, lecture-rooms, and rearrangement of rooms for the larger laboratories and engine-testing, opened on March 22, 1902; and the Congregational Church, Earlsfield-road, Wandsworth (Messrs. Mountford and Clapham), one of his latest works. In 1899-90 he acted as consulting architect with Mr. T. Geoffry Lucas for the Town Hall and Offices, Hitchin (March 30, 1901). Mr. Mountford was assessor in many important competitions, including those for the Lewisham and Plumstead Libraries; Trowbridge Technical School; Godalming, Henley-on-Thames, Plumstead, and Surbiton Municipal Buildings; Taunton and Hitchin Town Halls—1897-9; and the Maidenhead Free Library and Bristol New Central and Reference Library—1902-3. On June 23, 1900, we printed a report of his paper—"The Collaboration of the Architect, the Painter, and the Sculptor," read to the General Architectural Congress in London; in several of his chief designs will be found works by eminent sculptors and decorative artists. We may add that Mr. Mountford was an antiquary, a sportsman, and a leading member of the Surrey County Cricket Club; he is survived by his second wife, *née* Hounsham, whom he married in June, 1903, and, we gather, by a son and a daughter.

General Building News.

TRURO CATHEDRAL WESTERN TOWERS.—The Truro Cathedral Building Committee have concurred with the Dean and Chapter in accepting the estimate of Messrs. Henry Willcock & Co., builders and contractors, of Wolverhampton, of 15,369*l*., for the erection of the western towers with the spires. Messrs. Willcock were the contractors for the nave and Victoria (central) tower and spire. The Committee have also approved the appointment of Mr. E. T. Price as the clerk of the works.

NEW BUILDINGS, ROTHERHAM.—The Imperial Buildings at the top of High-street, Rotherham, a scheme of the Corporation, involving an expenditure of over 30,000*l*., were opened on the 6th inst. The new buildings have frontages to High-street, Church-street, Market-street, and Market-place, the frontage to High-street and returns to Church-street and Market-place being three-story, and the remainder two-story. The brickwork is of Accrington pressed bricks, and the dressings are of stone from the Stoke Hall Quarries, Derbyshire. The market quadrangle is covered in; the principal trusses are of steel in one span, with lantern in centre, fitted with ventilating louvres. The glazing is of Mellowes' patent bars and rough plate-glass. The works have been carried out by the general contractors, Messrs. Chadwick & Co., of Rotherham; the electric lift by the Keighley Electrical Engineering Company; the hot-water heating by Messrs. Wright Brothers, of Sheffield; the electric lighting by the County Borough Electrical Department; the gas by the County Borough Gas Department; the Arts Pavement Company, the lining of shops with tiles. The works have been carried out from the designs and under the superintendence of Mr. J. Platts, architect, of Rotherham. Mr. A. T. Ripley, of Rotherham, was the clerk of the works.

RHYL IMPROVEMENT SCHEME.—At Rhyl Town Hall recently an inquiry was conducted by Mr. H. E. Drury, on behalf of the Local Government Board, regarding the District Council's scheme for the improvement of the town by the erection of a pavilion and the laying out of a few acres of ornamental gardens on the foreshore, at an estimated cost of 9,752*l*. for the pavilion, and 4,250*l*. for the gardens. There was a numerous attendance of councillors and many ratepayers present. The Clerk (Mr. Rowlands) sketched the history of the proposals, and mentioned that there was no public building in the town other than the Town Hall. The Inspector said, with regard to the cost of the works, they had the surveyor's and architect's estimates, but beyond that the Council had received twenty-one tenders from contractors, and had provisionally accepted one. The plans of the pavilion were explained by the architect, and Mr. A. A. Goodall, Town Surveyor, explained the scheme relating to the gardens.

NEW LIBRARY, SOUTHWARK.—On January 30 a new library was declared open in the Borough of Southwark by Lord and Lady Llangattock. The site, which is at the corner of the Old and New Kent roads, was presented to the borough by his Lordship, and the cost of the erection of the building being defrayed by Mr. Andrew Carnegie. The building, erected by Messrs. F. & H. F. Higgs, of Loughborough Junction, from the designs and under the superintendence of Mr. Claude Batley, architect, is in the late Perpendicular Gothic style, in Portland stone, roofed with Westmorland slates. There is a clock-tower over the main entrance carrying as a weather vane a representation of a Viking ship, in allusion to the siege of London by King Cnut when he brought ships up a canal which he dug, probably in the vicinity of this site, to allow him to pass London Bridge. The corner staircase bay has spaces provided for mosaic panels, commemorating the connexion of Shakespeare with this immediate neighbourhood (the Committee have, unfortunately, not yet sufficient funds at their disposal to carry these out). Above these panels is the "Chaucer window," in which the Canterbury pilgrims are represented as starting from the "Tabard" which stood only a few hundred yards from this spot. Other leaded windows commemorate Sir John Fastolf, a local worthy of the XVth century, whose reputation seems to have suffered undeservedly; Gower, Goldsmith, Dickens, Eliza Cook, Mrs. Coventry Patmore, Ruskin, Harvard, and Mr. Andrew Carnegie, the two latter names illustrating the connexion between Southwark and America. This bay is crowned by a battlemented and traceried parapet. Internally the joinery and furniture is in oak, left oiled so as to tone naturally with age. On the screens are carved the names of some of the famous men who have been connected with the borough. Many other references to local interests have been embodied in the design. The first floor is to be devoted to the lending and reference departments, while the ground floor will contain the public reading and magazine rooms.

Miscellaneous.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.—The title of the Anglo-American Rubber Company, Ltd., has been (with the consent of the Board of Trade) changed to that of the "Peerless Rubber Manufacturing Company, Ltd." The company, carrying on business at 58, Holborn-viaduct, is the sole European depôt of the Peerless Rubber Manufacturing Company; New York Belting and Packing Company, Ltd.; Hartford Rubber Works Company; Morgan & Wright; Mechanical Rubber Company, of Cleveland; National India-Rubber Company; and Eureka Fire Hose Company.——Messrs. Chessum & Sons, builders, have removed their City office from 27, Devonshire-chambers, Bishopsgate-street Without, to 7A, South-place, Finsbury, E.C.——The Yorkshire Hennebique Contracting Company, Ltd., have removed their offices, etc., from East-parade, Leeds, to Viaduct Works, Kirkstall-road, Leeds.

CAMBERWELL ART GALLERY.—The Libraries Committee of the Camberwell Borough Council are arranging for estimates to be obtained for cleansing and decorative work at the Art Gallery, and are considering the advisability of substituting electricity for the present system of lighting by gas.

LEEDS UNIVERSITY EXTENSION LECTURES.—At the Leeds Philosophical Hall, on the 6th inst., Mr. John Bilson, F.S.A., of Hull, began a course of four lectures on "Mediæval Architecture in England," in connexion with the Leeds University Extension Society. Dr. Bodington, Vice-Chancellor of the University, who presided, said the University had not, in its earlier history, been able to do much in the way of University extension work; but, as the consolidation of their position went on, the council found they had some leisure to take up a branch of University work, which was considered a very useful function. This year they had been able to recognise architecture as a subject eminently deserving study, and he suggested that some day they might have at the University a chair of Architecture. The lecturer then proceeded with his discourse, which consisted largely of explanations as to details in the types of churches under consideration.

RESTORATION OF HOLYROOD CASTLE.—Mr. Charles Price asked the Chief Commissioner of Works in the Parliamentary papers recently whether his attention has been called to the statement made in Edinburgh by the Earl of Stair, that the trustees under the will of the late Lord Melville had been prevented from carrying out the terms of the trust in reference to the restoration of Holyrood Chapel, Edinburgh; and whether he proposes taking any action in the matter. Mr. Harcourt replied as follows:—"My attention has been called to the statement of the Earl of Stair, which was probably made under some misapprehension. The executors of Lord Leven's will believed that the legal formalities connected with the probate of the estate required an application to the King for a formal decision on the question of the restoration of Holyrood. In view of all the surrounding circumstances, and in consequence of the refusal to act by the persons designated to carry out this portion of the will, I felt it my duty to advise His Majesty that I should, on his behalf, decline to give permission for the work. As the Minister charged with the maintenance of the fabric I accept full responsibility for the advice which I tendered to His Majesty. I propose to take no further action in the matter, which is now closed."

LAMBETH COUNCIL.—At the meeting of the Lambeth Borough Council on Thursday last week, it was decided to ask the County Council to approve of the plans and application submitted by Mr. Pike for consent to the erection of the new King's College Hospital building upon the site of Nos. 150 to 160, Denmark-hill, to abut also upon Bessemer-road, and to the erection of a porter's lodge to abut upon Bessemer-road.——No objection was raised to an alteration in the plan for a new street to lead out of Tulse-hill. The plan was submitted by Messrs. Shaw & Lee, who are developing the Tulse-hill estate.——An estimate of 1,075*l.* was passed in connexion with the paving of footways around the new Town Hall at Brixton. In reply to a question, Mr. Townesend stated that no progress had yet been made in reference to the additional drainage which was found necessary to carry the water from the site of the town hall.——The Baths Committee reported that the six months' period of maintenance of works executed at the baths by Messrs. Ashwell & Nesbit had now expired, and the sum of 153*l.* 17*s.* 3*d.* was due to the firm, being the amount of the retention-money held by the Council during the maintenance period on the value of the work done, 1,538*l.* The penalty inflicted on this firm owing to non-payment of trade union rates was deducted in the previous certificate for payment of work done. It was, therefore, now agreed to pay the balance of 153*l.* odd.——To provide some work for the unemployed, it was agreed to have the land, which was recently purchased at Norwood for a depôt, cleared at a cost of 244*l.*——A report from the district auditor disallowed the amount of 11*l.* 10*s.* 8*d.* for the expenses of two delegates to the Sanitary Conference at Bristol. The amount, therefore, has been charged upon the persons who made, or authorised the making of, the payments.

ROAD REPAIRS AT DEPTFORD.—It was decided at the sitting of the Borough Council on Tuesday to carry out road repairing work at Kender-street, Lausanne-road, Brockley-road, Grinling-place, Abinger-road, Laurie-grove, and Brookmill-road, at an estimated cost of 500*l.* 16*s.*

DRAWING PENCILS.—Mr. A. W. Faber sends us an "H.B." sample of his new "Castell" drawing pencils. These are supplied in sixteen different degrees, from 8H to 6B. The lead, we are informed, is subjected during the process of manufacture to an entirely new method of treatment, securing extreme durability, with other desirable qualities. The specimen sent to us is certainly a very good pencil. These pencils are 4*d.* each, or 3*s.* 6*d.* per dozen; they are not therefore cheap, as pencils go; but we should say that they are worth their price.

Legal.

ARCHITECT'S CLAIM FOR COMMISSION.

BEFORE his Honour Judge Howard Smith and a jury on the 31st ult., at the Wolverhampton County-court, Alfred Irving Scott, architect and surveyor, of Wednesbury, sued Harry Battersby, manager and lessee of two theatres at Bilston and Wednesbury, for 56*l.* 6*s.* 6*d.*, the balance of an account for services rendered by the plaintiff in connexion with the proposed reconstruction of the Theatre Royal, Wednesbury.

Mr. Graham V. Milward (instructed by Mr. Glover) was for the plaintiff, and Mr. R. J. Lawrence (instructed by Mr. Hunton Carter) for the defendant.

The case for the plaintiff, as put by Mr. Milward, was that Mr. Scott was approached by Mr. Battersby with regard to proposed alterations at the Theatre Royal, Wednesbury. Acting on instructions in February, 1906, plaintiff made sketch plans of the theatres at Bilston and Wednesbury for the purpose of contrasting the two buildings. During 1906 there were constant interviews and much correspondence, and in June, 1907, it was decided to abandon the project and go in for an entirely new scheme, estimated to cost 2,200*l.* New plans were prepared by plaintiff, and then came on the scene a possible company, with "a rich man from down south." Plaintiff charged 10 guineas for the plans of the abandoned scheme, on which he was entitled to a commission of 2 per cent., amounting to 44*l.* There were other charges for plans and tracings for the Wednesbury Town Council, who approved of them, and for other persons. The plaintiff's total charges amounted to 61*l.* 6*s.* 6*d.*, and in response to a demand for payment defendant wrote:—"I will let you have a cheque as early as possible." Subsequently a cheque for 5*l.* on account was forwarded.

In his evidence plaintiff said Brent's Brewery Company were the owners of the Wednesbury Theatre, and he had an interview with one of their representatives as to the alterations. Had the work, as suggested, been carried out, he would have been entitled to a commission of 5 per cent. Plaintiff added that there had never been any objection to the amount of his fees.

In cross-examination plaintiff said, although he had never had any experience in actually building a theatre, he contended that he was entitled to 5 per cent. commission if the buildings were completed.

Further cross-examined, Mr. Scott said he did not think Mr. Battersby would personally pay for the alterations, but he received his instructions from defendant as to the plans, and he thought he would pay for them.

The Judge: It was not a speculation?

Plaintiff: Oh, no; I had definite instructions.

Replying to a juror, witness said the original estimate of 2,200*l.* was reduced to 1,500*l.* after an interview with a representative of the brewery company, because it was hinted that the first-named sum was financially impossible.

Mr. Lawrence: You were distinctly told that you would not have payment for the plans unless the brewery company or the company promoter found the money.

Plaintiff: There was never any suggestion that I should look either to the landlord or the speculator for my money.

Mr. Edward Martin Scott, Borough Surveyor of Wednesbury, and father of plaintiff, gave evidence as to the adoption of the plans by the Council, and Mr. Farmer, architect, said plaintiff had well earned his fees.

Defendant said he expressly told plaintiff when he saw him with regard to plans for the alterations that if the thing went through with the landlords—Brent's Brewery Company—it would be all right, but if not there would be an end of the matter. The first scheme put before the landlords went off, and then he got into communication with some company promoters.

His Honour: Did they get any money from you?

Witness: Yes. Proceeding, he said he told plaintiff, after seeing the company promoters, that there was every probability that alterations would be made, and it was agreed that plans should be forthcoming for the company promoters. He told plaintiff that the latter would pay for the alterations if they were made. The idea of reconstruction was still pending, but not with the company promoters. He did pay plaintiff 5*l.*, because he thought he should get the money back from the company promoters.

Mr. Pearson, a clerk to defendant's solicitor, said the whole business from beginning to end was a speculation.

Mr. William Hadderton, an architect, of West Bromwich, did not think plaintiff was entitled to a commission of 2 per cent.

Mr. Lawrence submitted that nothing was due to plaintiff, as the work was really a speculation.

The jury found for plaintiff for 40*l.*, and judgment was given with costs.—*Wolverhampton Chronicle.*

CASE UNDER THE LONDON BUILDING ACT.

THE case of the County of London Electric Supply Company *v.* Parkins came before a Divisional Court of King's Bench, consisting of the Lord Chief Justice and Justices A. T. Lawrence and Sutton, on the 12th inst., on the appeal of the Company from a decision of the Stipendiary sitting at the Clerkenwell Police Court convicting the appellants of an alleged contravention of the provisions of the London Building Act, 1894.

Mr. Danckwerts, K.C., and Mr. J. A. Simon appeared for the appellants, and Mr. Horace Avory, K.C., and Mr. R. O. B. Lane represented the respondent.

Mr Danckwerts, in opening the case, said that the point raised by the appeal was as to what was the definition of the word "structure" in the Act of 1894, and was the thing in question a structure.

From the special case which was read, it appeared that the appellants are a company registered under the Companies Acts to supply electric light under the terms of their provisional order. The respondent to the appeal was the District Surveyor to the Borough of Holborn under the London Building Act, 1894. The appellants were summoned before Mr Rose, the stipendiary at Clerkenwell, for having on the eastern side of Leather-lane, Holborn, laid a "street box" without having previously served a building notice under the provisions of the Act. At the hearing of the summons before the magistrate it was admitted that the appellants on or about July 1st, acting under the powers of their electric lighting order, constructed beneath the footway the thing described as a street box, which was used in connection with the repair of the appellants' cables. On behalf of the respondent it was contended that a building notice should have been served under sect. 145 of the Act. On behalf of the Company it was contended that the thing in question was not necessarily a building structure or work within the meaning of the Act, and that the company were under no obligation to serve such a notice. The magistrate held that the thing in question was a building or structure within the meaning of sect. 145, and that the notice was required to be served. He held, therefore, that the company had been guilty of an offence under the Act, and fined them 40*s.* and ordered them to pay 10*l.* 10*s.* costs. The question raised on the appeal was whether the magistrate's determination was right in point of law.

Mr. Danckwerts, continuing his argument, submitted that the box was not a "structure" within the meaning of the Act. It was a very small thing, being only 22½ in. by 24 in., and 30 in. deep. He considered that it would be very difficult for anyone to say that that was a "structure" within the meaning of the London Building Act. He had searched the Act through from beginning to end, and he was unable to find any provision in the Act which rendered the interposition of the District Surveyor of the smallest utility, and as far as he could make out he had nothing whatever to do with it. He wished to point out that all these structures had to be made in accordance with a scheme and plans approved by the local authority (the highway authority), the London County Council, and the company, subject to an appeal to the Board of Trade. The only function of the District Surveyor was to see that the provisions of the London Building Act were carried out. In the present case that Act had nothing whatever to do with the matter. The County Council had an inspector whose duty it was to watch the laying of these boxes, and who, in fact, did so. If it was necessary to serve a building notice in respect of these things, why should not a water company serve a similar notice before putting in the street the things for turning on and off water? According to the respondent, every manhole in a street must be a "structure." The whole thing could be pressed to an absurdity. He contended that the "structures" about which notice must be given to the District Surveyor were structures which had to be constructed and executed according to the London Building Act and no other structures.

Mr Avory having supported the conviction on behalf of the respondent,

The Lord Chief Justice, in giving judgment, said he should follow what he said in the Woodthorpe case. The present case differed from that in the circumstance that the structure in the present case was very much smaller than it was in the other, and that the County Council in the present case had had notice given to them under the Northern Extensions Order. He was unable to see the unreasonableness of the District Surveyor's having notice of the construction of these boxes under the footway, although he agreed with Mr Danckwerts that the line must be drawn somewhere. He was of opinion that it was quite impossible to hold that because the structure in the present case was smaller than that in the Woodthorpe case the decision in the Woodthorpe case should not be followed. As to the other point as to notice being given to the County Council under sect. 13 of the Northern Extensions Order, he need only say that the reason of the County Council having notice was so that they should see that the things should be put right from their point of view and to protect their interests. It was clear that the County Council protected public interests quite

independently of the public interests the District Surveyor safeguarded. He thought in the circumstances of the case that notice should have been given to the District Surveyor under the Act and that the conviction was right.

Justices A. T. Lawrence and Sutton concurred, and the appeal was accordingly dismissed with costs.

HOLBORN ANCIENT LIGHT CASE.

MR. JUSTICE PARKER, on the 6th inst., commenced the hearing of the case of J. Lyons & Co., Ltd., *v.* the British Electric Traction Company, Ltd.—an action by the plaintiffs to restrain the defendants from obstructing their ancient lights.

Mr. Buckmaster, K.C., and Mr. Borthwick appeared for the plaintiffs, and Mr. W. H. Upjohn, K.C., and Mr. Frederick Thompson for the defendants. Mr. Dill appeared for a party interested in the proceedings.

Mr. Buckmaster said his clients were the refreshment caterers, and the action was brought by them to obtain an injunction to restrain the defendants from erecting a large block of buildings so as to seriously interfere with the light of certain premises which the plaintiffs owned under a lease. The site in respect of which the dispute arose was bounded on the north by High Holborn, on the south by the small passage called Gate-street, on the east by New Turnstile, and on the west by Kingsway. The property of which the plaintiffs complained of being injured by the defendants' proposed building operations, comprised No. 229, High Holborn, Nos. 8, 9, and 10, New Turnstile, and No. 20, Gate-street, defendants' property fronting on Kingsway. Plaintiffs were the leaseholders of their premises under a lease dated in March, 1904, the term being for eighty-one and a half years. No. 229, High Holborn consisted of a shop (now unlet) on the ground floor, and three stories above. No. 10, New Turnstile was used on the ground floor for a coffee-house with three stories above with windows looking towards the west. No. 9, New Turnstile carried on on the ground floor the business of a public-house, it having a long, narrow saloon bar lighted by a lantern light with windows sloping towards the north and south, and which also looked directly towards the west. Those premises had three stories above the ground floor. Before the defendants' building was commenced to be erected there was no material interference with the light of Nos. 9 or 10, which came from the west. No. 8, New Turnstile was rather different. The ground floor was used as a shop, having above it three stories. There had always been a building directly opposite the windows on the ground and first floors of No. 8, and it might be doubted whether defendants' new building would cause any further material interference with the light coming to the windows on those floors, and even on the second floor. But, before the defendants' building operations, the window on the third floor enjoyed a good light from the west, which would be seriously interfered with if the defendants' building was put up. The plaintiffs' case was that in No. 9 the light of the saloon bar of the public-house, having regard to its character and position, would be seriously interfered with by the defendants' building. No. 20, Gate-street had a ground and two floors above, and the windows affected by the defendants' building would be those on the first and second floors. The first-floor room derived a considerable quantity of important light formerly from a window facing north, and that light would be seriously affected by the defendants' new building. The top floor was lighted by skylights. It had a sloping roof on one side, and three lights looking to the east and three to the west. It could not be disputed that defendants' building would seriously affect the lights facing the west; but he supposed it would be argued that the light coming from the east was so abundant that no material interference would be caused by the defendants' building, and that, having regard to the decision in the Colls' case, the plaintiffs would not be entitled to relief on that part of the case. But that allegation would give rise to a very important question of law, and that was the consideration whether the light which the plaintiffs had left was an indefeasible right to it. To get an indefeasible right a plaintiff must have his right asserted by an action. The windows which it was alleged would be obstructed in the No. 229, High Holborn all looked towards the south. In 1903 the building which formerly stood on the site of the defendants' new building was pulled down. The proposed new building at its highest point was to be about 92 ft. 6 in. high, it being distant from the western windows in the plaintiffs' New Turnstile premises about 45 ft. Defendants' new building was to be about 56 ft. higher than the old building which formerly stood on the site. The former obstruction to the lantern light of No. 9, New Turnstile was 39 deg. from the horizon. If the defendants' new building was completed, it would amount to 61 deg. In the case of the first floor of No. 8, New Turnstile the former obstruction was 29 deg., but the obstruction caused by the defendants' building would be 51 deg. The same figures roughly represented the obstruction to the first floor of No. 10, New Turnstile. On the second floor the obstruction would be more marked. At No. 20, Gate-street the defendants' building would completely take away a large horizontal angle of light on the first floor. At No. 229, High Holborn there would be practically the same result. There were several defences raised. The first and main defence was that, having regard to the provisions of sections of the Great Northern and Strand Railway Act, 1899, and of the Great Northern and Piccadilly and Brompton (Various) Powers Act, 1905, the defendants' buildings were required to be constructed from plans approved by the London County Council, and such buildings were to be constructed under an agreement for a lease dated in October, 1906, made between the defendants and the Great Northern, Piccadilly, and Brompton Railway Company. Defendants seemed to think that that gave them the right to block the plaintiffs' lights, and that those statutes operated the same as if defendants had purchased the land under the provisions of the Lands Clauses Acts. The fact that the London County Council had to approve the defendants' plans would not entitle them to build so as to obstruct the plaintiffs' ancient lights. Defendants also denied that the plaintiffs' lights were ancient, but that they were would be strictly proved. Another defence was that in December, 1904, plaintiffs, through a Mr. Holman, their surveyor, had, in a party-wall dispute, had constructive notice of what the defendants proposed to do, and had acquiesced in it. As the defendants at that time had no interest in the property, that was a wonderful defence to raise. Defendants further said that in 1906 Mr. Holman had, as representing the plaintiffs, the plans of the proposed new building, but that was denied.

At the close of the learned counsel's address, his Lordship acceded to the suggestion that he should personally visit the *locus in quo*, and rose for that purpose.

On the 7th inst. Mr. Buckmaster, after counsel had had an interview with the learned judge in his private room, stated that, subject to the plaintiffs' getting the assent of their freeholders to the terms, a settlement had been arrived at. There was no reason to believe that the freeholders would stand in the way of a settlement, but they required that their surveyor should see the plans of the defendants' proposed building before assenting to the terms. It was not anticipated that the learned judge would be further troubled with the case, but, subject to his Lordship's sanction, it had been arranged that the case should stand over for one week for the purpose of the freeholder's surveyor looking through the plans, and if need be the matter could be mentioned to his Lordship again.

His Lordship assented to this arrangement.

PARTY-WALL DISPUTE.

MR. JUSTICE PARKER, in the Chancery Division on the 6th inst., delivered judgment in the case of Jones *v.* Pritchard—an action by the plaintiff for an injunction to restrain the defendant from causing a nuisance by smoke, soot, and other offensive matters and vapours coming to the plaintiff's house, and from so using his (the defendant's) premises as to occasion danger by fire to the plaintiff's house.

The facts were as follows:—The plaintiff's house, known as Chauntrey House, adjoined that of the defendant at Beaumaris in the county of Anglesea. Plaintiff's house was built prior to 1886, and the defendant's house, known as Gwynfa, was not erected until after August 26, 1886. Chauntrey House was originally a detached residence, having its western wall abutting on the site on which Gwynfa subsequently stood, and the predecessor in title of the plaintiff, thinking that the owner of the site might probably wish to build a house upon it, had the western wall of Chauntrey House constructed with fireplaces and flues so as to make it capable of being used by any house erected on that side. On August 26, 1886, defendant and plaintiff's predecessor in title entered into an agreement for the sale to the defendant of the western half of the western wall of Chauntrey House, the intention being that the wall thereafter should be a party wall to be held by the parties in divided moieties. Shortly after the agreement was executed, defendant erected his house so as to utilise the fireplaces on his side of the party wall, and for the purposes of his house he afterwards used the fireplaces and flues in connexion therewith. Plaintiff purchased his house in 1900. Subsequently the flue connected with the defendant's drawing-room became defective, and, in consequence, smoke found its way through the plaintiff's half of the party wall into his premises, doing some considerable damage to the decorations and furniture. Hence the present action. The question in the case was whether, in the circumstances, the defendant was liable in respect of a nuisance.

Mr. Justice Parker, in the course of an elaborate judgment dealing with the law of easements, said he thought the evidence established that there had been some subsidence or settlement, and that the cracks in question had been caused thereby. But the cause of the subsidence or settlement was undetermined, and there was no evidence at all that the defendant, either in building his house or in anything which he had since done, had been guilty of any negligence or want of reasonable precaution, or had acted otherwise than he was justified in acting under the circumstances of the case. He thought, therefore, that the action failed, and must be dismissed with costs.

Patents of the Week.

APPLICATIONS PUBLISHED.*

22,425 of 1906.—S. O. COWPER-COLES: *Manufacture of Cement.*

This relates to the manufacture of a cement from blast furnace slag, and consists in the slag, after it has been disintegrated, being mixed with the required quantity of carbonate of calcium to give the necessary proportions for a good cement. The whole is then mixed together with a weak acid solution, and placed in a rectangular brick chamber, at the ends of which are graphite electrodes, or the slurry may be dried and broken up. The composition is placed between these electrodes, and a strong current of electricity passed through the mixture, so as to bring it to the temperature required to convert the several ingredients into the calcium silicates.

753 of 1907.—T. W. STROUT and J. J. HOYLES: *Sliding Sashes.*

This relates to reversible sliding sashes, wherein the sashes are so constructed that it is possible for the exterior of the glass to be cleaned from the inside of the room, and the sash cords also can be renewed or the sashes rehung without disturbing the fixed beads, and consists in the frames being of the usual construction, but having in addition a fixed false head, which allows a sufficient height for the top sash to hinge back free from the bottom sash. Each sash is rebated and fixed to slides with thumb screws, and also hinged at the bottom with riveted hinges. For cleaning purposes the screws are drawn out clear of the slides and the sashes allowed to fall back on their hinges. The outside linings of the frame are tongued to fit grooves in slides to keep same in position. The sash cord passes down on the outside of the frames until it reaches the slides, where they pass through grooves on the inner side of same, and then out at an angle to the outer side, where they are held by a metal grip hinged in a metal case flush with the face of the slide. Pocket pieces fixed with a cup and screw are made removable without disturbing any fixed beads. The sashes are secured at the meeting rails with ordinary sash fasteners.

913 of 1907.—J. BARTER: *Hand Tools for Nailing, and the like.*

This relates to a hand tool for readily and easily placing and holding nails in the position required and then driving the same home, comprising in combination a cylinder or casing, a spring-retracted spindle working therein, said spindle having its lower end reduced in diameter, or having a portion of reduced diameter attached to its lower end, a cap or nose attached to the lower end of the cylinder or casing, and having a passage therethrough in which the reduced portion of the spindle works, and a screwed cap at the upper end of the said cylinder through which the spindle passes, and which permits of adjustment of the normal position of the spindle in order to accommodate nails, rivets, or the like of different lengths.

1,132 of 1907.—J. HAZLEWOOD and C. FORREST: *An Expansion Joint for Hot Water and Steam Pipes.*

This relates to an expansion joint for hot-water and steam pipes, with expanded and shaped metal body strengthened with outside rings to resist internal pressure, the body being riveted and soldered to the end rings, and the centre ring being formed in one or two parts, and arranged so as to prevent expansion of the joint outwards.

* All these applications are in the stage in which opposition to the grant of patents upon them can be made.

PATENTS.—*Continued on page 196.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xix; Auction Sales, xxx.

Certain conditions, beyond those given in the following information, are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bonâ-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements: and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competition.

FEBRUARY 26.—**Gorseinon.**—REBUILDING EBENEZER.—The Committee responsible for rebuilding Ebenezer, Gorseinon, are prepared to offer 5*l.* 5s. for the best plan of a chapel of 650 sittings, not to exceed 2,000*l.* Tenderers are requested to send also their charges for making out specifications and bills of quantities for their respective plans. The present chapel and site may be seen on application to Rev. D. H. Thomas, Gorseinon.

Contracts.

BUILDING.

FEBRUARY 17.—**Bootle.**—CORRUGATE BUILDING.—The Corporation of Bootle invite tenders for the construction of a corrugated iron building. Plans, etc., be seen, and bills of quantities obtained, at the office of the Borough Engineer.

FEBRUARY 17.—**Oban.**—ADDITIONS.—For bricklayer, joiner, plumber, slater, and plaster works of additions to Argyllshire Gathering Hall, Oban. Schedules may be obtained from Mr. Charles Macintyre, architect, Oban.

FEBRUARY 17.—**Tyntyla.**—RESIDENCE.—The erection of a villa residence, together with boundary walls, etc., at Tyntyla, near Ystrad, Rhondda, for Mr. Aneurin Cule, Pentre. Plans, etc., can be seen, and bills of quantities obtained, at offices of Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd, on receipt of deposit of 1*l.* 1s.

FEBRUARY 17.—**Welford and Sulby.**—SCHOOL WORKS.—The Managers of Welford and Sulby Endowed Schools, Northants, invite tenders for alterations and additions at the Welford and Sulby Schools in accordance with drawings, etc., prepared by the architect, Mr. J. T. Blackwell, 53, High-street, Kettering.

FEBRUARY 18.—**Hutton-le-Hole.**—HOUSE.—The erection of a country house, situate at Hutton-le-Hole, near Kirbymoorside. Plans, etc., may be seen, and bills of quantities obtained, at the offices of Messrs. Ridgway & De Bock Porter, architects and surveyors, Malton.

FEBRUARY 19.—**Bowcombe.**—CHAPEL AND SCHOOLS.—The erection of chapel and schools at Bowcombe. For particulars apply to Mr. S. E. Tomkins, architect and surveyor, Newport, I.W.

FEBRUARY 19.—**Darlington.**—BOWL HOUSE.—Darlington Corporation invite tenders for the erection of a shelter and bowl house at Bank Top Park. Plans, etc., may be seen, and quantities obtained, on application to Mr. George Winter, Borough Surveyor, Town Hall.

FEBRUARY 19.—**Edinburgh.**—RESTAURANT AND CLUB.—The Committee of Scottish National Exhibition, Edinburgh, 1908, invite tenders for the erection of the first-class restaurant and club at Saughton Park for the Exhibition. Specifications, etc., may be seen at the office of Mr. Jas. D. Gibson, surveyor, 60, Frederick-street, Edinburgh. Copies of schedules and conditions of contract can be had from the Secretary, Mr. Jas. Marchbank, S.S.C., 45, York-place, Edinburgh, on deposit of 1*l.* 1s.

FEBRUARY 19.—**Rathdown.**—COTTAGES.—Rathdown No. 1 R.D.C. invite tenders for the building of thirteen double labourers' cottages, *i.e.*, twenty-five cottages in all. Plans, etc., can be obtained from the Clerk to the R.D.C. on payment of 5s.

FEBRUARY 19.—**Whitchurch.**—ALTERING.—Cardiff Corporation invite tenders for altering, painting, and renovating "Ty-clyd" House, and converting shed into temporary stable at the Mental Hospital, Whitchurch. Specification can be seen, and further particulars obtained, on application at the office of the City Engineer, Mr. W. Harpur, M.Inst.C.E., City Hall, Cardiff.

FEBRUARY 20.—**Burslem.**—WALLS, ETC.—Burslem Gas Committee invite tenders for raising the walls and repairing and making good the roof of the retort house at the Burslem Corporation Gasworks. Plans, etc., may be seen, and all particulars obtained, at the Engineer's Office at the Gasworks, Longport.

FEBRUARY 20.—**Golcar.**—RESIDENCE.—The erection of a villa residence in Station-road, Golcar. Plans may be seen, and bills of quantities obtained, at office of Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

FEBRUARY 20.—**Hunslet Moor.**—SCHOOL.—Leeds Education Committee invite tenders for the trades required in the erection of Hunslet Moor Council School. Applications for quantities to be sent to the Architect to the Committee, Mr. W. S. Braithwaite, Education Offices, Leeds.

* FEBRUARY 20.—**Lambeth.**—MORTUARY IMPROVEMENTS.—The Lambeth Borough Council invite tenders for carrying out of works incidental to improvements of mortuary premises, Lambeth. For further particulars see advertisement in this issue.

FEBRUARY 20.—**Leeds.**—SCHOOL.—Leeds Education Committee invite tenders for any of the trades required in the erection of the Hunslet Moor Council School. Applications for quantities to be sent to the Architect to the Committee, Mr. W. S. Braithwaite, Education Offices, Leeds.

FEBRUARY 20.—**Whiston, Prescot.**—NURSES' HOME.—Prescot Guardians invite tenders for the erection and completion of extension of the nurses' home buildings at the Workhouse, Whiston, Prescot. Quantities may be obtained at the office of Mr. James Gandy, architect, Masonic-chambers, St. Helens, on deposit of 1*l.* Tenders are also invited for the formation of a padded room at the female imbecile buildings at the Workhouse.

FEBRUARY 21.—**Bolton-on-Dearne.**—SCHOOL.—West Riding C.C. Education Committee invite tenders for general alterations and asphalting Bolton-on-Dearne Provided School. Plans may be seen, and bills of quantities obtained, on application to office of Mr. J. Vickers-Edwards, County Architect, County Hall, Wakefield. A deposit of 1*l.* is required. Cheques, etc., must be made payable to the West Riding Treasurer, and sent to him direct at the County Hall, Wakefield.

FEBRUARY 21.—**Carlton (Barnsley).**—SCHOOL WORKS.—West Riding C.C. Education Committee invite whole or separate tenders for alterations and additions, Carlton (Barnsley) Provided School. Plans may be seen, and bills of quantities obtained, on application to office of Mr. J. Vickers-Edwards, County Architect, County Hall, Wakefield. A deposit of 1*l.* is required, which will be returned on receipt of a bonâ-fide tender. Cheques, etc., must be made payable to the West Riding Treasurer, and sent to him direct at the County Hall, Wakefield.

FEBRUARY 21.—**High Wycombe.**—MILLS, ETC.—The erection of new mills, granary, corn stores, etc., Priory-road, High Wycombe, for Mr. G. E. Stevens, corn and coal merchant, etc. Plans, etc., may be seen at the office of Messrs. Hooper & Nash, architects, Church-street, High Wycombe.

FEBRUARY 21.—**Leeds.**—LODGE, ETC.—Leeds Corporation Waterworks Committee invite tenders for the construction of a lodge and outbuildings at the new filter beds, Headingley. Plans may be seen, and specifications, etc., obtained, at the office of Mr. Charles G. Hanzell, Waterworks Engineer, on payment of a deposit of 1*l.*

FEBRUARY 21.—**North Broomhill.**—SCHOOL-CHAPEL.—The erection of a school-chapel, at North Broomhill, for the Primitive Methodist Trustees. Plans, etc., may be seen on application to Mr. Wm. Burton, A.R.S.I., architect, 69, Queen-street, Amble.

FEBRUARY 21.—**Skipton.**—SCHOOL WORKS.—West Riding C.C. Education Committee invite tenders for builder, joiner, plumber, asphalter works, general alterations, and asphalting, Skipton, Water-street Provided School. Plans may be seen, and bills of quantities obtained, on application to office of Mr. J. Vickers-Edwards, County Architect, County Hall, Wakefield. A deposit of 1*l.* is required. Cheques, etc., must be made payable to the West Riding Treasurer, and sent to him direct at the County Hall, Wakefield.

FEBRUARY 21.—**Swaledale.**—INSTITUTE.—The building of a new literary institute at Low-row, Swaledale. Plans, etc., may be seen at Low-row Post-office, Richmond, Yorks.

FEBRUARY 21.—**Walton.**—SCHOOL ADDITIONS.—West Riding C.C. Education Committee invite tenders as follows:—Walton Provided School, near Wakefield (alterations and additions); Carlton (Barnsley) Provided School (alterations and additions); Bolton-on-Dearne Provided School (general alterations and asphalting); Skipton, Water-street Provided School (general alterations and asphalting). Plans may be seen, and bills of quantities obtained, on application to office of Mr. J. Vickers-Edwards, County Architect, County Hall, Wakefield. A deposit of 1*l.* is required in each case. Cheques, etc., must be made payable to the West Riding Treasurer, and sent to him direct at the County Hall, Wakefield.

FEBRUARY 22.—**Carlisle.**—CHURCH.—The erection of a Primitive Methodist Church at Warwick Bridge, Carlisle, for the Trustees. Plans, etc., can be seen at Mr. J. Johnson's, 25A, Castle-street, Carlisle; also at Mr. Waddell's, Cumberland Mills, Warwick Bridge; and at the office of Messrs. W. G. Scott & Co., architects and surveyors, 2, Park-lane, Workington.

FEBRUARY 22.—**Rotherham.**—BUSINESS PREMISES.—New business premises, corner of Westgate and Domine-lane, Rotherham, comprising saleshops, show and other rooms, restaurant, etc., for the Masbro' Equitable Pioneers' Society, Ltd. Names to Mr. J. Platts, architect and surveyor, High-street, Rotherham, accompanied with a deposit of 3*l.* 3s.

FEBRUARY 24.—**Aberdare.**—HOUSES.—Building forty houses on Cwmdare-road, Aberdare, for the Windsor Building Club. Plans, etc., can be seen at the office of Mr. Alec. S. Cameron, architect, 1, Glanant-street, Aberdare.

FEBRUARY 24.—**Calstock.**—FARMHOUSE.—The erection of a new farmhouse at West Harrowbarrow, Calstock. Plans, etc., may be seen on application to the architect, Mr. Lawrence Scantlebury, architect and surveyor, George-place, Callington.

FEBRUARY 24.—**Cwmdare, Aberdare.**—HOUSES.—For building thirty houses at Cwmdare, Aberdare, for the Bwllfa Building Club. Plans, etc., can be seen at the office of Mr. Alec. S. Cameron, architect, 1, Glanant-street, Aberdare.

FEBRUARY 24.—**Elie.**—VILLA.—Estimates wanted for the various works required in the erection of a villa (brick) in Elie, Fife. Plans, etc., may be seen, and schedules of measurement obtained, at the office of Messrs. J. & T. W. Currie, architects, Elie, on deposit of 10s.

FEBRUARY 24.—**High Wycombe.**—LATRINES.—The erection of new latrines at Central Schools, Priory-road, for the High Wycombe Borough Education Committee. For particulars apply to Mr. Thos. Thurlow, architect, High Wycombe.

FEBRUARY 24.—**Lexden.**—ADDITIONS, ETC., TO INFIRMARY.—Lexden and Winstree Guardians invite tenders for making alterations and additions to the Infirmary at the Workhouse. Plans, etc., may be seen at the offices of Messrs. Goodey & Cressall, architects and surveyors, St. Peter's Chambers, High-street, Colchester.

FEBRUARY 24.—**Preston.**—COTTAGES.—Preston Guardians invite tenders for the erection of six cottages. Copies of the specification may be obtained from Mr. Knight, Master of the Fulwood Workhouse, upon deposit of 2*l.*

FEBRUARY 24.—**Seaforth.**—SANITARY CONVENIENCES, ETC.—The U.D.C. of Waterloo-with-Seaforth invite tenders for the erection of sanitary conveniences and repairs to existing buildings at Seaforth Recreation Ground. Plans, etc., may be seen, and bills of quantities obtained, on application to Mr. F. Spencer Yates, A.M.Inst.C.E., the Surveyor to the Council, at the Town Hall, Waterloo. The sum of 10s. 6d. must be deposited for quantities.

FEBRUARY 24.—**Winton.**—DEPOT.—Bournemouth B.C. invite tenders for the erection of a new depôt at Winton. Forms of tender, etc., can be obtained of the Borough Engineer, Mr. F. W. Lacey, provided that the sum of 1*l.* 1s. has been previously deposited.

* FEBRUARY 25.—**Shardlow.**—NEW LAUNDRY BLOCK.—The Shardlow Board of Guardians invite tenders for new laundry block at the Union Workhouse. For further particulars see advertisement in this issue.

FEBRUARY 25.—**Taunton.**—SHOPS, ETC.—Taunton Town Charity invite tenders for pulling down and rebuilding the shops and business premises, being Nos. 3 and 4, Station-road, Taunton. The plans, etc., may be inspected, and bills of quantities obtained, at the office of Mr. J. Houghton Spencer, architect, 5, Hammet-street, Taunton.

FEBRUARY 26.—**Creebridge.**—ADDITIONS, ETC., TO HOUSE.—The mason and brick, joiner, slater, plumber, and plaster works of additions to and alterations on Holm Park House, Creebridge, for Mr. Arthur C. Armitage, of Kirroughtree. Plans, etc., may be seen at the office of Mr. David K. Park, architect, Newton Stewart.

FEBRUARY 28.—**Cardiff.**—ADDITIONS.—Messrs. Rapport Brothers, No. 90, Bridge-street, Cardiff, invite tenders for building additions to their premises. Plans, etc., may be obtained at the above address.

FEBRUARY 29.—**Bury.**—SCHOOL.—Bury Corporation invite tenders for the materials and workmanship required in the erection and completion of the East Ward Council School. Drawings may be seen, and specification, etc., obtained, upon application to Mr. Arthur W. Bradley, A.M.Inst.C.E., Borough Engineer and Surveyor, Bury, and payment of a deposit of 10s. for each trade.

* FEBRUARY 29.—**Chandler's Ford.**—SCHOOL.—The Southampton C.C. invite tenders for new Council school at Chandler's Ford. For further particulars see advertisement in this issue.

FEBRUARY 29.—**Guildford.**—ALTERATIONS, ETC.—The Guardians invite tenders for the carrying out of some small alterations, and plumbers' and painters' work in the nurseries and attendant's room at the Union Workhouse, Guildford. A plan, etc., can be seen on application at the offices of Mr. Edward L. Lunn, architect, 36, High-street, Guildford.

* MARCH 2.—**Canterbury.**—ALTERATIONS TO SCHOOL.—The Kent Education Committee invite tenders for alterations to St. Stephen (Hackington) Council School, near Canterbury. For further particulars see advertisement in this issue.

MARCH 2.—**Stone.**—SCHOOL ADDITIONS.—The Governors of Alleyne's Grammar School, Stone, Staffordshire, invite tenders for the erection of new laboratory, class and lecture rooms, etc., in accordance with plans, etc., prepared by Mr. W. E. Rogers, architect, Rugeley, at whose office plans, etc., may be inspected, and bills of quantities obtained, on payment of a deposit of 1*l.* 1s.

MARCH 3.—**Llandrindod Wells.**—POLICE-STATION, ETC.—The erection of a police-station, petty-sessional court, and county offices at Llandrindod Wells for the Radnorshire C.C. Plans, etc., may be seen, and bills of quantities obtained, at offices of Mr. R. Wellings Thomas, F.R.I.B.A., architect, Llandrindod Wells.

MARCH 3.—**Tattingstone.**—ALTERATION, ETC., OF SCHOOL.—Tattingstone Schools Managers invite ten-

ders for the enlargement and alteration of the school. Plans, etc., may be seen at the offices of Messrs. Brown & Burgess, architects, Arcade-street, Ipswich.

NO DATE. — **Bo'ness.** — CHURCH. — For Carriden Parish Church, Bo'ness, for mason, joiner, plumber, and slater works. Schedule on payment of 10s. deposit. Mr. P. Macgregor Chalmers, 95, Bath-street, Glasgow.

NO DATE.—**Gellilydan.**—SCHOOL.—The Welsh Campaign Committee invite tenders for building an Elementary School at Gellilydan, near Maentwrog. The plans, etc., may be obtained from the architects, Messrs. Deakin & Howard Jones, M.S.A., Borth, R.S.O., on payment of 1*l.* 1s.

NO DATE. — **Leominster.** — POST-OFFICE.—The erection of a general post-office at Leominster for Mr. A. T. Southall. Apply in writing to Mr. W. W. Robinson, architect, 10, King-street, Hereford.

NO DATE.—**Lymington.**—HOUSE.—The erection of a house, proposed to be built in Belmore-lane, Lymington, for Major Armitage. Plans, etc., can be seen at the offices of Mr. John Bevir, architect, 35 and 36, St. Thomas's-street, Lymington.

NO DATE.—**Pentyrch.**—RESIDENCE.—The erection of a residence at Pentyrch, near Cardiff, for Mr. Thos. Evans. Copies of plans, etc., may be obtained of Mr. Fred. C. Stibbs, architect and surveyor, 33, Queen-street, Cardiff.

NO DATE. — **Shipley.** — ADDITIONS. —The masons', joiners', plumbers', and slaters' work required in the erection of additions to Westfield Works, Wrose Hill, Shipley, for Messrs. M. Kellett & Sons, Ltd. Bills of quantities may be obtained, and plans seen, at the address of Mr. Fred. Wade, A.R.I.B.A., architect and surveyor, 47, Beamsley-road, Frizinghall, Bradford.

NO DATE.—**Skinburness.**—ADDITIONS TO COTTAGE.—Addition to cottage, Skinburness, for Mr. C. H. Allen, Penrith. Plans, etc., at offices of Mr. George Armstrong, architect and surveyor, 24, Bank-street, Carlisle.

NO DATE.—**Tingley.**—SUNDAY SCHOOLS.—The erection of new Wesleyan Sunday Schools at Tingley, near Morley. Names to Messrs. Garside & Pennington, architects, Pontefract and Castleford.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 17.—**Newport, Mon.**—TIMBER FENDER.—The Corporation invite tenders for the erection of a timber fender at the transporter bridge (west side). Plans, etc., may be seen, and bills of quantities obtained, at the Borough Engineer's Office upon production of a receipt from the Borough Treasurer for a deposit of 1*l.* 1s.

FEBRUARY 18. — **Manchester.** — TRAMWAY RAILS.—Manchester Corporation Tramways Committee invite tenders for the supply and delivery of (*a*) steel girder tramway rails, (*b*) tie-bars, (*c*) span wire-brackets. Specifications, etc., may be obtained on application to Mr. J. M. M'Elroy, General Manager, Tramways Department, 55, Piccadilly, Manchester, on deposit of 2*l.* 2s.

FEBRUARY 20. — **Dundee.** — WHARF RECLAMATION. — Dundee Harbour Trustees invite tenders for the construction in ferro-concrete of No. 2 section of the eastern wharf reclamation (about 310 lineal ft.). The general plans, specifications, etc., may be seen or obtained at the office of Mr. J. Hannay Thompson, M.Inst.C.E., Harbour Engineer, Harbour Engineer's office, Dundee. The contractor will be required to deposit a fee of 5*l.* 5s.

FEBRUARY 21. — **Leeds.** — CAST-IRON PIPES. — The Waterworks Committee of the Leeds City Council invite tenders for the supply of about 939 tons of cast-iron spigot and socket pipes of 33 in., 30 in., and 12 in. diameter, and about 270 tons of irregular pipes and castings, for the second section of the pipe line from Kirkby Malzeard to Colsterdale. Tender forms, etc., may be obtained, and drawings seen, at the office of Mr. Charles G. Henzell, Waterworks Engineer, Leeds.

FEBRUARY 21. — **Rawtenstall.** — CRANE, ETC. — Rawtenstall Corporation invite tenders for one overhead travelling crane (contract No. 6) and of a battery of accumulators, automatic reversible booster, and accessories (contract No. 7). Copies of the general conditions, etc., may be seen at the offices of the engineers, Messrs. Lacey, Sillar, & Leigh, 2, Queen Anne's-gate, Westminster, and 78, King-street, Manchester, and may be obtained from the former office only on payment of a deposit of 2*l.* 2s. for each contract.

FEBRUARY 24. — **Belfast.** — SIGNALLING. — Great Northern Railway Company (Ireland) Directors invite tenders for the re-signalling of their Adelaide and Windsor Station, and some alterations at Belfast Central Junction. Plans, etc., to be seen at the office of Mr. W. H. Mills, Engineer-in-Chief, Amiens-street Terminus, Dublin, and copies at the office of the District Engineer, Belfast.

FEBRUARY 24. — **Llandilo.** — WIDENING RAILWAY.—Great Western Railway Directors invite tenders for widening the Llandilo branch railway between Pontardulais and Bynea Stations—about three and three-quarter miles—and other works. Plans, etc., may be seen, and forms of tender, etc., obtained, at the office of the New Works Engineer, Paddington Station, London.

FEBRUARY 27. — **Manchester.** — GAS-HOLDER.—Manchester Corporation Gas Committee invite tenders for the construction of a four-lift gas-holder, etc., at their Bradford-road gas-station. General conditions of contract and specification, etc., can be obtained on application (in writing only) to Mr. C. Nickson, superintendent, Gas Department, Town Hall, on payment of 5*l.* 5s. Drawings may be seen, the site inspected, and any other information obtained on application to Mr. J. G. Newbigging, M.Inst.C.E., Rochdale-road Station.

FEBRUARY 29.—**Birr, Ireland.**—WATER WORKS.—Birr U.D.C. invite tenders for the construction of intake weir and well, screening chamber, filters, and service reservoirs in concrete, and the supplying and laying of pipes, etc. Plans, etc., prepared by Messrs. Bergin and Browne, joint engineers, may be seen at the offices of the Council, where copies of the form of tender may be obtained, on deposit of 2*l.*

MARCH 4.—**Handsworth.**—ELECTRIC LIGHTING, ETC. —The U.D.C. of Handsworth invite tenders for the supply, delivery, and erection of plant at their electric power station (three contracts). Copies of the specifications, with the conditions of contract, etc., can be obtained from Mr. Ernest Ward, Clerk, The Council House, Handsworth, near Birmingham, on payment of 3*l.* 3s. for each specification. Specifications, etc., can be seen at the offices of the consulting engineers, Messrs. Kennedy & Jenkin, 17, Victoria-street, Westminster, London, S.W.

★ MARCH 4. — **Southwark.** — WELL-SINKING.—The Southwark B.C. invite tenders for (1) sinking well and (2) providing and fixing pumping plant at Public Baths, Manor-place, S.E. For further particulars see advertisement in this issue.

MAY 1.—**Quebec.** CRANE.—Quebec Harbour Commissioners of Quebec, Canada, invite tenders for the supply of a 30-ton capacity floating crane, particulars of which may be had from the Commissioners' Chief Engineer, Mr. St. Geo. Boswell.

NO DATE. — **Hartlepool.** — ENGINES. — Hartlepool Port and Harbour Commission invite tenders for supplying and fitting both engines of No. 4 steam hopper barge with steam reversing gear. Mr. J. D. Howkins, Engineer to the Port and Harbour Commission, Hartlepool.

MISCELLANEOUS.

FEBRUARY 17. — **Edinburgh.** — CARTING. — Mid-Lothian C.C. invite estimates for carting road materials within the four districts of the county. Schedules of quantities may be obtained at the Road Office, County Buildings, Edinburgh; or from the District Road Surveyors.

FEBRUARY 17.—**Elgin.**—FURNISHINGS.—Furnishings of enlarged and altered buildings at Dr. Gray's Hospital, Elgin. Schedules of articles required may be obtained from Mr. John Wittet, architect, Elgin.

FEBRUARY 17.—**Leicester.**—LAMPS AND COLUMNS.—Leicester Watch Committee invite tenders from local firms for the supply of copper lamps and iron columns. Full information may be obtained by applying to the Superintendent of Lighting, Mr. John Tebb, at his office, No. 7, Belgrave-gate.

FEBRUARY 17. — **London.** — STEEL BUOYS. — Trinity House, London, E.C., invite tenders for the construction and delivery at Yarmouth, Blackwall, Penzance, and Holyhead of certain steel can, conical, and wreck buoys. Drawings may be inspected, and forms of tender obtained, at this house.

FEBRUARY 17. — **Southend-on-Sea.** — UPKEEP OF GROUNDS.—Southend-on-Sea Corporation invite tenders for the upkeep of the grounds surrounding the Public Library, Victoria-avenue. The specification of the work may be obtained upon application to Mr. W. Clay, Borough Librarian, Public Library, Victoria-avenue.

FEBRUARY 18.—**Dundee.**—QUARRYING, ETC.—Quarrying and carting metal for road repairs for the ensuing season within the Dundee District of Forfarshire. Particulars, etc., may be had from Mr. J. B. Roberton, Road Surveyor, Downfield, Dundee.

FEBRUARY 19. — **Edinburgh.** — TILING OF WALLS.—Edinburgh P.C. invite tenders for re-tiling of walls and floors, etc., of the existing kitchen provision stores at Craigleith Poorhouse, and the re-glazing of roof lights of all buildings at the institution. Specifications can be had from Mr. R. M. Cameron, 53, Great King-street, Architect to the Council.

FEBRUARY 19. — **Eton.**—SCAVENGING.—Eton R.D.C. invite tenders for the work of scavenging in the Parish of Gerrard's Cross. Specification, etc., are deposited with Mr. C. E. Colston, Clerk of the Parish Council, at the School House, Gerrard's Cross. Any further particulars will be supplied by the Sanitary Inspector, Mr. R. A. Wilson, 160, High-street, Slough.

FEBRUARY 19. — **Hardingstone.** — TEAM LABOUR.—The R.D.C. of Hardingstone invite tenders for team labour on the several district roads. Tender forms, etc., may be obtained of Mr. J. C. Sturges, Surveyor, 13, Lutterworth-road, Northampton.

FEBRUARY 19.—**Hoddesdon.**—STREET WATERING.—Hoddesdon U.D.C. invite tenders for watering the streets of Hoddesdon. A specification of the work can be seen, and forms of tender obtained, at the office of the Surveyor, Mr. W. H. Flood, High-street, Hoddesdon.

FEBRUARY 19. — **Rickmansworth.** — SCAVENGING, ETC.—Rickmansworth U.D.C. invite tenders for the removal and disposal of house refuse. Also for cartage. Forms of tender, etc., can be obtained on application to the Surveyor, Mr. A. Freeman, Urban District Council Offices, Rickmansworth.

FEBRUARY 20.—**Brixworth.**—HAULAGE.—Brixworth R.D.C. invite tenders for the haulage of stone. Forms can be obtained from Mr. Wykes, 5, Elysium-terrace, Northampton.

FEBRUARY 20.—**Cardiff.**—LEAD SERVICE WORK.—The Corporation of Cardiff invite tenders for lead service work within the city and outside districts of supply. Only firms having places of business within the area of supply are requested to tender for plumber's work. Specifications may be seen, and forms of tender obtained, at the offices of Mr. C. H. Priestley, M.Inst.C.E., Waterworks Engineer, City Hall, Cardiff.

FEBRUARY 20.—**Great Baddow.**—SCAVENGING.—The R.D.C. of Chelmsford invite tenders for the removal of house refuse in a portion of the parish of Great Baddow. Also for the removal of house refuse in a portion of the parish of Widford. Particulars may be obtained from Mr. William Edser, Sanitary Inspector, Bank-chambers, Chelmsford.

FEBRUARY 20. — **Spilsby.** — TEAM LABOUR. — Spilsby R.D.C. invite tenders for leading materials for the repair of main roads and other highways. Forms of tender may be had on application to the District Highway Surveyor or to the Sub-Surveyors of the several parishes in the rural district.

FEBRUARY 21.—**Hoddesdon.**—SCAVENGING.—Hoddesdon U.D.C. invite tenders for providing horses for their dust carts, and men to accompany the same. A specification of the work to be performed can be seen at the office of the Surveyor, Mr. W. H. Flood, High-street, Hoddesdon, from whom form of tender can be obtained.

FEBRUARY 21.—**Nottingham.**—SANITARY FITTINGS.—The Health Committee of the Nottingham Corporation invite tenders for taking out the old fittings and supplying and fixing new sanitary fittings and other alterations to the public urinal, St. Peter's Church-side. Plans may be seen, and specifications, etc., obtained, from Mr. Frank B. Lewis, City Architect, Guildhall, on payment of a deposit of 1*l.* 1s.

FEBRUARY 22. — **East Stonehouse.** — SCAVENGING, ETC.—The East Stonehouse U.D.C. invite tenders for Contract 5.—(*a*) Collection of house refuse, etc.; (*b*) the carting of materials generally; (*c*) the hire of horses and men for use with rotary broom and watering carts. Contract 6.—The barging of house refuse, etc. Particulars, etc., on paying a deposit of 1*l.* 1s. Mr. C. H. Trounce, Surveyor.

FEBRUARY 22.—**Shrewsbury.**—HAULAGE.—Haulage of broken and unbroken stone for the repair of the main roads in the six divisions of the county. Copy of the specification, with form of tender, etc., at office of Mr. A. T. Davis, M.Inst.C.E., County Surveyor, Shirehall, Shrewsbury.

FEBRUARY 24.—**Hampton Wick.**—SCAVENGING, ETC. —The U.D.C. of Hampton Wick invite tenders for horsing and driving of water-vans, carts, etc.; for the supply of men, horses, and carts for scavening generally and carting; for the weekly collection and disposal of dust, ashes, and rubbish from all houses and gardens throughout the district. Mr. Harold Fawssett, Clerk to the Council, Council Offices, High-street, Hampton Wick.

FEBRUARY 24. — **Warrington.**—HOSE.—Warrington Fire Engine Committee invite tenders for ten 25-yd. lengths of 2½-in. hose piping and two lengths of suction hose. Specifications, etc., may be obtained at the office of the Borough Surveyor, Town Hall.

FEBRUARY 25.—**Stroud.**—HAULING.—Stroud R.D.C. invite tenders for hauling stone. Specification, etc., can be obtained by applying at office of Mr. J. E. Haynes, Surveyor, Union Offices, Stroud.

FEBRUARY 26.—**Derby.**—TEAM LABOUR.—Derbyshire C.C. invite tenders for team labour. Forms of tender and conditions of contract may be obtained at office of Mr. J. W. Horton, County Surveyor, County Offices, St. Mary's-gate.

FEBRUARY 29. — **Beverley.** — TEAM LABOUR. — East Riding C.C. Highways and Bridges Committee invite tenders for the carting of about 6,000 tons of stone. Conditions, etc., may be obtained on application to the County Surveyor or to the Road Foreman.

MARCH 2.—**Bishops Stortford.**—FIRE ENGINE.—The U.D.C. invite tenders for the supply and delivery of a steam fire-engine, capable of throwing from 260-300 gallons per minute. Firms tendering are requested to quote prices for (1) a motor steam fire-engine, and (2) a horse-drawn engine. Mr. Thos. Swatheridge, Clerk of the Council, Council Offices, Offices, 7, North-street, Bishop's Stortford.

MARCH 2. — **London.** — CARTAGE. — Middlesex C.C. invite tenders for the cartage of broken granite, chippings, etc. Particulars, etc., may be obtained at offices of Mr. H. T. Wakelam, M.Inst.C.E., County Engineer and Surveyor, Middlesex Guildhall, Westminster, S.W.

MARCH 3.—**Beddington.** — SCAVENGING. — Beddington Parochial Committee invite tenders (1) for the weekly collection and removal of house and garden refuse; (2) for the supply of horses and carmen for street watering. Forms of tender, etc., may be obtained at the offices of the Rural District Council, Town Hall, Croydon.

MARCH 4. — **Bingham.** — TEAM LABOUR.—Bingham R.D.C. invite tenders for team labour. Forms of tender may be obtained on application to Mr. R. H. Beaumont, Clerk.

MARCH 5.—**Wallington.**—SCAVENGING.—Wallington Parochial Committee invite tenders for the weekly collection and removal of house and garden refuse, and for the supply of horses and carmen for street watering. Forms of tender, etc., may be obtained at the offices of the Rural District Council, Town Hall, Croydon.

NO DATE.—**Ipswich.**—TENNIS COURT.—Specification and tenders for construction of concrete or asphalte tennis court, 90 ft. by 33 ft. Mr. Edgell, Freston Hill, Ipswich.

NO DATE.—**Pateley Bridge.**—STEAM ROLLING.—Steam rolling and scarifying in the rural district of Pateley Bridge. For particulars apply to Mr. Wm. Oddie, Clerk to the Rural District Council, Pateley Bridge.

PAINTING, etc.

FEBRUARY 17. — **Preston.**—PAINTING.—Preston Corporation invite tenders for the painting, etc., required to be done at the Baths, Saul-street. Specification may be seen, and form of tender obtained, at the office of the Borough Surveyor, Town Hall, Preston.

FEBRUARY 17. — **Stockton-on-Tees.** — PLUMBER'S WORK.—The Corporation invite tenders for the plumber's work required in the conversion of privies into water-closets for the year ending March 31, 1909. Tender forms will be supplied upon application to Mr. M. H. Sykes, Borough Engineer, Town Hall, Stockton-on-Tees.

FEBRUARY 18-20. — **Wigan.** — PAINTING. — Wigan Guardians invite tenders for painting and decorating required to be done at the Union Offices, Victoria-buildings, King-street, Wigan. Specifications may be obtained at office of Mr. Henry Ackerley, Clerk, 9, Victoria-buildings, King-street, Wigan.

FEBRUARY 20. — **Ipswich.** — PAINTING. — Painting work to be carried out at the Borough Fever Hospital. Specification, etc., on application at the Borough Surveyor's Office, Town Hall, Ipswich.

FEBRUARY 20. — **Manchester.** — PAINTING. — The Sanitary Committee invite tenders for painting the interiors of the Corporation dwellings in Chester-street, Granville-place (Pollard-street), Pott-street, Sanitary-street, Victoria-square (Oldham-road), and Alexandra-place (Rochdale-road). Specification may be obtained at the office of the City Architect, Town Hall.

★ MARCH 4. — **Poplar.** — PAINTING, ETC. — The Guardians of the Parish of Poplar invite tenders for external painting, distempering, and general

repairs at the Lanzley House Receiving Home for Children, Poplar. For further particulars see advertisement in this issue.

ROADS, SANITARY, AND WATER WORKS.

FEBRUARY 18.—**Acton.**—STREET WORKS.—Acton U.D.C. invite tenders for private street works. Full particulars, etc., can be obtained from Mr. D. J. Ebbetts, surveyor, 57, High-street, Acton, London, W.

FEBRUARY 18.—**Cranbrook.**—DRAINAGE.—For the partial redraining of the Cranbrook Police-station. Form at the office of the County Architect, 86, Week-street, Maidstone. Specification and plan of the work can be inspected at the station.

FEBRUARY 19.—**Barrow-in-Furness.**—STREET WORKS.—The Corporation invite tenders for the execution of certain street works, in Foundry-street. Bills of quantities, etc., may be obtained on application at the Borough Engineer's Office Town Hall.

FEBRUARY 19.—**Bootle.**—FOOTWALKS.—The Corporation of Bootle invite tenders for the construction of tar macadam footwalks in Derby-park. Plans, etc., may be seen, and bills of quantities obtained, at the office of the Borough Engineer, Mr. B. J. Wolfenden, A.M.Inst.C.E.

FEBRUARY 19.—**Bournemouth.**—MAKING UP.—Bournemouth B.C. invite tenders for making up Green-road (first portion). Forms of tender, etc., can be obtained of the Borough Engineer, Mr. F. W. Lacey, provided that the sum of 1*l.* 1s. has been previously deposited.

FEBRUARY 19.—**Bournemouth.**—SEWERING.—Bournemouth B.C. invite tenders for sewering Muccleshell-road. Forms of tender, etc., can be obtained of the Borough Engineer, Mr. F. W. Lacey, provided that the sum of 1*l.* 1s. has been previously deposited.

FEBRUARY 19.—**Herne Bay.**—SEWERS.—Herne Bay U.D.C. invite tenders for the sewering of streets. Plans, etc., can be seen, and forms of tenders obtained, from Mr. F. W. J. Palmer, Surveyor to the Council, Town Hall, Herne Bay.

FEBRUARY 20.—**Dore.**—ROAD WORKS.—Dore R.D.C. invite tenders for general repairs to, and hauling for, the roads. Forms can be obtained from the Surveyors, viz., Mr. J. Lewis, Ewyas Harold; and Mr. Philip Gwillim, Cwm Dulas, Pontrilas.

FEBRUARY 20.—**Sutton.**—TAR PAVING.—Sutton (Surrey) U.D.C. invite tenders for the supply and laying of 2,500 super. yds., or thereabouts, of tar paving to footways. Plans, etc., may be seen at the offices of Mr. C. Chambers Smith, Surveyor to the Council, Municipal Offices, Sutton, Surrey.

FEBRUARY 22.—**Sowerby Bridge.**—PIPES, ETC.—The Waterworks Committee invite tenders for the supply of 100 tons of 9-in. spigot and socket water-pipes and 6 tons of 9-in. special pipes. Also for the excavation of about 1,400 yds. of pipe trench for the laying of the above pipes. Further particulars can be obtained on application to Mr. John Hopkinson, Waterworks Engineer, at his office, Town's-buildings, Sowerby Bridge.

FEBRUARY 22.—**Willenhall.**—ROAD WORKS.—Willenhall U.D.C. invite tenders for the sewering, levelling, metalling, paving, kerbing, and channelling, and making generally of a portion of Regent-street, Willenhall. Drawings, etc., are to be seen, and bills of quantities, etc., obtained, on deposit of 1*l.*, at the office of Mr. T. Edgar Fellows, C.E., Engineer and Surveyor to the Council, Town Hall, Willenhall.

FEBRUARY 22.—**Willenhall.**—ROAD WORKS.—Willenhall U.D.C. invite tenders for the sewering, levelling, metalling, paving, kerbing and channelling, and making generally of Primrose-street, Portobello, Willenhall. Drawings, etc., are to be seen, and bill of quantities, etc., obtained, on deposit of 1*l.*, at the office of Mr. T. Edgar Fellows, C.E., Engineer and Surveyor to the Council Town Hall, Wilenhall.

FEBRUARY 24.—**Belfast.**—SEWER.—Belfast Improvement Committee invite tenders for the construction of about 331 lin. yds. of 24-in. earthenware pipe sewer in North-road and about 277 lin. yds. of 18-in. earthenware pipe sewer in Upper Newtownards-road. Drawings, etc., can be seen, and bill of quantities obtained, at the office of the City Surveyor.

FEBRUARY 24.—**Epsom.**—PIPES FOR WATERWORKS.—Epsom U.D.C. invite tenders for the supply of about 1,000 yds. of 6-in. cast-iron pipes in 12 ft. lengths and specials. Specification, etc., may be obtained on payment of 2*l.* 2s. from Mr. W. Vaux Graham, M.Inst.C.E., 5, Queen Anne's-gate, Westminster, S.W.

FEBRUARY 24.—**Hornchurch.**—SEWERS.—Romford R.D.C. invite tenders for the construction of about 79 yds. of 30-in. armoured concrete tube surface-water drain in Church-street, Hornchurch; about 281 yds. of 18-in. stoneware pipe surface-water drain in Carter-road, Hornchurch. Full particulars may be seen, and form of tender obtained, upon application to Mr. E. G. Boden, Surveyor to the Council, Victoria-chambers, Romford.

FEBRUARY 24.—**Stanley.**—STREET WORKS.—Stanley U.D.C. invite tenders for private street improvement works at South Moor. Plans, etc., may be seen, and quantities and forms of tender obtained, from Mr. Jos. Routledge, Surveyor, Council Offices, Stanley.

FEBRUARY 25.—**Islington.**—PAVING.—Islington B.C. invite tenders for repaving with granite setts and wood blocks the margins of the carriageways of Caledonian-road and portions of Camden-road and Seven Sisters-road, and paving with granite setts the margins of the carriageway of Archway-road, in the Borough of Islington. Conditions, etc., may be seen, and forms of tender, etc., obtained, upon application to the Borough Engineer, Mr. J. Patten Barber, at the Town Hall, Upper-street, N., and payment of 2*l.* 2s.

FEBRUARY 25.—**Ushaw Moor.**—SEWAGE WORKS.—Lanchester R.D.C. invite tenders for the construction of streaming filters, septic tanks, and drains in connexion with Ushaw Moor sewage. Plans, etc., may be seen, and bills of quantities obtained, at the office of Mr. J. R. Lupton, Surveyor, Lanchester.

✱ FEBRUARY 25.—**Willesden.**—ROAD-MAKING, ETC.—The Willesden D.C. invite tenders for certain road-making and paving works in James'-avenue, Mora-road, Agave-road, Olive-road, and Holm-road, Cricklewood, and Christchurch-avenue, Brondesbury. For further particulars see advertisement in this issue.

FEBRUARY 26.—**Fulham.**—MAKING-UP.—Fulham B.C. invite tenders for making-up the carriageway of Inglethorpe-street (section 2). Plans, etc., may be seen at office of Mr. Francis Wood, M.Inst.C.E., F.G.S., Borough Surveyor, at his office, Town Hall, Fulham, S.W.

FEBRUARY 26.—**Long Benton, etc.**—STREET WORKS.—The Tynemouth R.D.C. invite tenders for the construction of carriageways, footpaths, channels, etc., in streets at Long Benton and Forest Hall. Plans, etc., may be seen at the office of Mr. A. S. Dinning, 21, Ellison-place, Newcastle.

FEBRUARY 26.—**Neston.**—SEWER.—Neston and Parkgate U.D.C. invite tenders for the construction of about 320 yds. of 6-in. pipe sewer, etc., in Raby-road and their cemetery at Neston. Plans may be seen, and specification, etc., obtained, at the office of Messrs. Green, Knowles, & Russell, 19, South John-street, Liverpool, on payment of a deposit of 1*l.* 1s

FEBRUARY 25.—**Peterston-super-Ely, near Cardiff.**—ROADS AND SEWERS.—Tenders are invited by Mr. John Cory, J.P., for the construction of about 1,140 yds. of road, together with pipe sewers, surface-water drains, and manholes. Plans, etc., may be seen, and bills of quantities, etc., obtained, on deposit of 1*l.* 1s., at Coryndon Estate Office, Peterston-super-Ely, near Cardiff.

✱ FEBRUARY 27.—**London.**—ANNUAL CONTRACTS.—The Islington B.C. invite tenders for works and materials for one year from April 1 next. For further particulars see advertisement in this issue.

FEBRUARY 28-MARCH 2.—**Cramlington.**—SEWERS.—Cramlington U.D.C. invite tenders for sewer and sewage-disposal works in the vicinity of Crow Hall-lane, near Cramlington Station. Plans, etc., may be seen, and tender forms obtained, on application to Mr. Wm. J. Coulson, Surveyor, Council Offices, Cramlington.

MARCH 2.—**Dawley.**—WATER SUPPLY.—Dawley U.D.C. (Salop) invite tenders from manufacturers for the supply of about four miles of 7-in. and 6-in. cast-iron pipes; eight miles of 4-in. and 3-in. ditto; two and a half miles of 2-in. ditto, and special castings. Specifications, etc., can be obtained at the offices of the engineers, Messrs. Willcox & Raikes, Union Chambers, 63, Temple-row, Birmingham, on payment of a deposit of 3*l.* 3s. Contract No. 2. The Council invite tenders for laying and jointing, also the construction of two service reservoirs, etc. Drawings, etc., may be seen, and bills of quantities and form of tender obtained, at the office of the engineers, on payment of a deposit of 3*l.* 3s.

MARCH 2.—**Gulval Cross.**—SCHOOL WATER SUPPLY.—Cornwall Education Committee invite tenders for the proposed water supply at Gulval Cross Council School. Plan, etc., may be seen by appointment at the school, or at the office of Mr. Sampson Hill, Architect to the Committee, Green-lane, Redruth.

✱ MARCH 2.—**Hendon.**—WORKS AND MATERIALS.—The Hendon U.D.C. invite tenders for materials, etc., for one year from April 1 next. For further particulars see advertisement in this issue.

MARCH 4.—**Derby.**—SEWAGE WORKS.—Derby Corporation invite tenders for the construction of twelve continuous filters, together with all the necessary culverts, etc.; and also for 22,000 cube yds. of filtering material. The drawings may be seen, and copies of the specification, etc., obtained, at the office of the engineers, Messrs. James Mansergh & Sons, 5, Victoria-street, Westminster, on the deposit of cheque or banknote for 5*l.*

✱ MARCH 4.—**Sevenoaks.**—SEWERAGE.—The Sevenoaks R.D.C. invite tenders for construction of 9-in. pipe sewer, and works in connexion with it, at Brasted. For further particulars see advertisement in this issue.

MARCH 4.—**South Shields.**—STREET WORKS.—South Shields Corporation invite tenders for providing and laying in situ concrete to footways and back streets in the Borough for twelve months ending March 31, 1909—approximate quantity, 5,000 sq. yds. Specification, etc., can be obtained at the office of Mr. S. E. Burgess, M.Inst.C.E., Borough Engineer and Surveyor, Chapter-row, South Shields.

MARCH 7.—**Eyemouth.**—DREDGING.—Eyemouth Harbour Trustees invite tenders for dredging work in the harbour and channel at Eyemouth. Plans may be seen, and copies of the specification, etc., obtained, on application to Messrs. Thomas Meik & Sons, civil engineers, 29, St. Andrew-square, Edinburgh.

MARCH 7.—**Glasgow.**—DRAINAGE WORKS.—Glasgow Corporation invite tenders for the construction of sewer No. 4, contract No. 1, extending from the site of the pumping-station in St. James-street at Park-street, to a point in Govan-street, east of Crown-street, and pipe sewer (No. 5), extending from a point in Paisley road, at St. James-street, to a point in Old Govan-road, at Rutland-lane. Plans, etc., may be seen, and specifications, etc., obtained, on application to the City Engineer, at his office, City-chambers, 64, Cochrane-street, Glasgow, on payment of a fee of 5*l.* 5s.

NO DATE.—**Cardiff.**—ROADS, ETC.—The construction of roads and sewer works in the Cardiff district for the Heath Estate. Names to Messrs. Veall & Sant, architects, 5, Arcade-chambers, High-street, Cardiff.

NO DATE.—**Warsop.**—SEWERAGE WORKS.—Warsop U.D.C. invite tenders for laying about five and a half miles of pipe sewers, with the necessary manholes and flushing chambers, and the construction of pumping station and disposal works complete. The drawings, etc., may be seen at the offices of the engineers, Messrs. Vallance & Westwick, White Hart-chambers, Mansfield, and schedule of quantities, etc., obtained, on the deposit of 5*l.*

STONE, MATERIALS, AND STORES.

FEBRUARY 17.—**Antrim.**—SUPPLIES.—Antrim District Lunatic Asylum Committee invite tenders for supplying plumbing materials, paints and oils, timber, etc. Official forms to be had from the Clerk of the Asylum, Holywell, Antrim.

FEBRUARY 17.—**Beverley.**—STONE.—Beverley D.C. Highways Committee invite tenders for the supply of about 5,000 to 6,000 tons of stone. Particulars, etc., may be obtained on application to Mr. E. Picker, C.E., surveyor, Beverley.

FEBRUARY 17.—**Macclesfield.**—MATERIALS.—The R.D.C. of Macclesfield invite tenders for the supply of road stone, copper slag, lime stone, setts, edging stones, walling rubble, and earthenware pipes. Forms of tender may be had on application to the Assistant Clerk to the Council, at the Union Offices, Macclesfield.

FEBRUARY 17.—**St. Marylebone.**—MATERIALS, ETC.—The Council of the Borough of St. Marylebone invite tenders for works and materials for one year. Further particulars and forms of tender may be obtained on application at the Town Hall.

FEBRUARY 17.—**Southampton.**—MATERIALS.—Royal Counties Agricultural Society invite tenders for the supply of corrugated iron, roofing-felt, nails, and other materials in connexion with the works for the Southampton Show. Forms of tender may be obtained of the Secretary, Mr. Franklin Simmons, Basingstoke.

FEBRUARY 17.—**Stockton-on-Tees.**—ANNUAL SUPPLIES.—The District Fund, Gas, and Electricity Committees invite tenders for the several articles and stores required. Forms of tender, etc., may be obtained of the Borough Surveyor, Gas Manager, and Electrical Engineer.

FEBRUARY 17.—**Towcester.**—ROAD MATERIALS.—Towcester R.D.C. invite tenders for the supply of granite and slag. Forms of tender, etc., may be obtained on application to Mr. W. Sheppard, of Towcester, Surveyor to the Council.

FEBRUARY 18.—**Acton.**—ANNUAL CONTRACTS.—Acton D.C. invite tenders for the supply and delivery of materials. Particulars, etc., may be obtained at No. 57, High-street, Acton.

FEBRUARY 18.—**Bromley.**—MATERIALS.—Bromley B.C. invite tenders for timber, ironmongery, builders' materials, tools, oils, paints, etc., ironfounders' work, tar-paving materials, etc. Particulars may be obtained at the Municipal Buildings on payment of the sum of 10s.

FEBRUARY 18.—**Dundee.**—MATERIALS.—For materials, Dundee District of Forfarshire (seven contracts). Schedules and particulars may be obtained from Mr. J. B. Roberton, Road Surveyor, Downfield, Dundee.

FEBRUARY 18.—**Foleshill.**—GRANITE.—Foleshill R.D.C. invite tenders for the supply of granite. Forms of tender may be had on application to the Surveyor, Union Buildings, Foleshill.

FEBRUARY 18.—**Hemel Hempsted.**—ANNUAL CONTRACTS.—Tenders are invited for the supply of requisites for the year ending March 31, 1909. Forms from Mr. Walter R. Locke, Borough Engineer and Surveyor, Town Hall, Hemel Hempsted.

FEBRUARY 18.—**London.**—GIRDER SPAN.—The Secretary of State for India in Council is prepared to receive tenders for supply of one 170-ft. girder span. The conditions of contract may be obtained on application to the Director-General of Stores, India Office, Whitehall, S.W.

FEBRUARY 19.—**Bacup.**—ANNUAL CONTRACTS.—The Corporation invite tenders for materials. Further particulars and forms of tender can be had on application at the Borough Surveyor's office.

FEBRUARY 19.—**Dublin.**—STORES.—The Corporation invite tenders for stores and articles. Specifications, etc., may be obtained at the offices of Mr. Spencer Harty, Borough Surveyor, City Hall, Dublin, on payment of 1s. for each form.

FEBRUARY 19.—**Huddersfield.**—STORES.—Huddersfield Gas Committee invite tenders for stores and materials. Forms of tender, etc., may be obtained on application to the Engineer of the Gas Department, Mr. Edward A. Harman, M.Inst.C.E.

FEBRUARY 19.—**London.**—STEEL PLATES, ETC.—The East Indian Railway Company invite tenders for the supply and delivery of:—(1) Mild steel plates, bars, etc.; (2) files; (3) kodalies, phowrahs, and shovels; (4) hammer handles and mallets, as per specification to be seen at the Company's offices, Nicholas-lane, London, E.C. Fees, which cannot, under any circumstances, be returned, are charged for the specifications as under, viz.:—For Nos. 1 to 3, 21s. each, and for No. 4, 10s. 6d.

FEBRUARY 19.—**Mutford.**—ROAD MATERIALS.—The R.D.C. of Mutford and Lothingland invite tenders for road materials. Forms of tender, etc., can be obtained of the Council's Surveyor, Mr. S. G. Bloy, Oulton Broad, Lowestoft.

FEBRUARY 19.—**Wisbech.**—GRANITE, ETC.—Wisbech R.D.C. invite tenders for the supply of road material. Forms of tender may be obtained on application to the Highway Surveyor for the North District, Mr. A. G. Catling, 4, Post Office-lane, Wisbech.

FEBRUARY 20.—**Aston Manor.**—STORES.—Aston Manor Public Works Sub-Committee invite tenders for supplying materials and stores. Forms of tender may be obtained at office of Mr. F. W. Richardson, Borough Surveyor, Council House, Aston Manor.

FEBRUARY 20.—**Burslem.**—STORES.—Burslem Corporation invite tenders for the supply of materials and goods. Particulars and forms of tender may be obtained from Mr. F. Bettany, Borough Engineer and Surveyor, Municipal Offices.

FEBRUARY 20.—**Cardiff.**—PIPES.—Cardiff Corporation invite tenders for the supply of cast-iron socket pipes, together with about 20 tons of irregulars and special castings. Specification, etc., can be obtained, together with other information, on application at the office of Mr. C. H. Priestley, M.Inst.C.E., the Waterworks Engineer, City Hall, Cardiff.

FEBRUARY 20.—**Lambeth.**—TIMBER.—Lambeth B.C. invite quotations for the supply of timber for sewer work for one year. Specification, etc., may be obtained upon application to Mr. Henry Edwards, C.E., at 346, Kennington-road, S.E.

FEBRUARY 20.—**Lanchester.**—STONE.—Lanchester R.D.C. invite tenders for the supply of about 11,500 tons of limestone, 2,400 tons of whinstone, and 300 tons of slag. Tenders are also invited for cartage. Forms of tender may be obtained from Mr. W. Cumming, Surveyor's office, Lanchester, Durham.

FEBRUARY 20.—**Stafford.**—STORES.—Stafford Cor-

poration invite tenders for the supply of stores and materials. Forms of tender may be obtained by applying to Mr. W. Blackshaw, Borough Engineer, Borough Hall, Stafford, on payment of 5s. each.

FEBRUARY 20.—**Wigston Magna.**—GRANITE.—Wigston Magna U.D.C. invite tenders for the supply of broken granite. Forms to be obtained at the office of the surveyor, Station-road, Wigston Magna.

MARCH 21.—**Formby.**—ANNUAL CONTRACTS.—The U.D.C. invite tenders for the supplying of materials. Specification, etc., may be obtained on application to the Surveyor, Mr. A. W. Pattison.

FEBRUARY 21.—**Hull.**—STONE.—Hull Corporation invite tenders for the supply of about 7,500 tons of stone. Forms of tender and other particulars may be obtained at the City Engineer's office.

FEBRUARY 21.—**Rathmines.**—SUPPLIES.—The U.D.C. of Rathmines and Rathgar invite tenders for supplies. Official form can be obtained at the Surveyor's office, Town Hall, Rathmines.

FEBRUARY 22.—**Bury.**—PIPES, ETC.—The Bury and District Water Board invite tenders for the supply of about 480 of 8-in. diameter iron pipes and special castings. Copies of the specification, etc., may be obtained at the office of the Engineer, Mr. J. Cartwright, 21, Parson's-lane, Bury, on deposit of 1*l.*

FEBRUARY 22. — **Northampton.** — MATERIALS. — Northampton Corporation invite tenders for the supply of materials. Specifications, etc., may be obtained on application to the Borough Engineer, Mr. Alfred Fidler, M.Inst.C.E.

FEBRUARY 22. — **Swinton.** — MATERIALS.—Swinton and Pendlebury U.D.C. invite tenders for materials. Specifications, etc., may be obtained on application to Mr. H. Entwisle, Engineer and Surveyor, Council Offices, Swinton, Manchester.

FEBRUARY 22. — **Walton-le-Dale.** — WORK AND MATERIAL.—The Walton-le-Dale U.D.C. invite tenders for work and materials. Mr. W. S. Woodcock, Clerk, Council Offices, Bamber Bridge.

FEBRUARY 22.—**Welton.**—ROAD MATERIAL.—Welton R.D.C. invite tenders for the supply of about 6,000 tons of broken granite, about 3,000 tons of broken slag; also for chips and gravel for footpaths. Specifications and forms of tender can be obtained from Mr. W. B. Danby, Clerk, 2, Bank-street, Lincoln.

FEBRUARY 24.—**Darlington.**—MATERIAL.—Darlington R.D.C. invite tenders for supplying goods and materials. Full particulars and forms of tender can be obtained on application to the Surveyor, Union Offices, Darlington.

FEBRUARY 24.—**Great Yarmouth.**—STORES.—Great Yarmouth T.C. invite tenders for the supply of stoneware pipes, etc., oils, paints, timber, etc. Forms of tender, etc., can be obtained on application at the Borough Surveyor's Office.

FEBRUARY 24.—**Hitchin.**—GRANITE.—The Hitchin U.D.C. invite tenders for the supply and delivery of 2,300 tons of 2-in., 1½-in., and 1¼-in. broken granite. Mr. Wm. Onslow Times, Clerk to the Council, the Town Hall, Hitchin.

FEBRUARY 24.—**Ilford.**—ANNUAL CONTRACTS.—Ilford U.D.C. invite tenders for materials. Forms of tender, etc., may be obtained on application at the Surveyor's Department, Town Hall Offices.

FEBRUARY 24.—**Leeds.**—TIMBER.—Leeds Corporation Gas Committee invite tenders for the supply of English and foreign timber required at the several gasworks. Forms of tender may be obtained on application to Mr. R. M. Townsley, General Manager, Gas Offices, East-parade, Leeds.

FEBRUARY 24. — **London.** — CREOSOTE. — Great Western Railway Directors invite tenders for the supply of about 1,300,000 gallons of creosote. Forms of tender may be obtained on application to Mr. G. K. Mills, Secretary, Paddington Station, London.

FEBRUARY 24.—**Sheffield.**—ANNUAL CONTRACTS.—Sheffield Highway and Sewerage Committee invite tenders for labour and materials for the year. Particulars and forms of tender may be obtained, and samples of materials and workmanship inspected, at the office of Mr. Charles F. Wike, City Surveyor, Town Hall, Sheffield, on payment of the sum of 10s.

FEBRUARY 24.—**Sowerby Bridge.**—RETORTS, ETC.—The Sowerby Bridge U.D.C. Gasworks Committee invite tenders for the supply of retorts, firebricks, fireblocks, fireclay, etc., for the Sowerby Bridge and Luddenden Foot Gasworks. Specifications, etc., can be obtained on application to Mr. A. W. Bissell, Engineer, Gasworks, Sowerby Bridge.

FEBRUARY 25.—**Deptford.**—ANNUAL CONTRACTS.—Deptford B.C. invite tenders for the execution of works and the supply of materials. Printed particulars, etc., can be obtained at the Town Hall, New-cross-road, S.E.

FEBRUARY 25.—**Doncaster.**—GRANITE, ETC.—The R.D.C. of Doncaster invite tenders for the supply of dross and granite, with samples. Specifications, etc., may be obtained on applying to Mr. W. R. Crabtree, Highway Surveyor of the Council, at the Union Offices, High-street, Doncaster.

FEBRUARY 25.—**Esher.**—MATERIALS.—The U.D.C. of Esher and the Dittons invites tenders for materials. Forms of tender may be obtained on application to Mr. H. C. Fread, Surveyor to the Council, enclosing a stamped addressed foolscap envelope.

FEBRUARY 25.—**York.**—STORES.—York Corporation invite tenders for the supply of general stores, road-making material, carting, etc. Forms of tender, etc., will be supplied upon application to the City Engineer's office.

FEBRUARY 26.—**Doncaster.**—DROSS, ETC.—The R.D.C. of Doncaster invite tenders for the supply of dross and granite. Specifications, etc., may be obtained on applying to Mr. W. R. Crabtree, Highway Surveyor, at the Union Offices, High-street, Doncaster.

FEBRUARY 27.—**Croydon.**—MATERIALS.—Croydon R.D.C. invite tenders for broken granite, hand-picked flints, dug flints, and fine gravel, tarpaving, kerbing, pitching, and channelling, etc. Forms of tender, etc., can be obtained on application to Mr. Ernest John Gowen, Clerk of the Council, District Council Offices, Town Hall, Croydon, and samples of tools, etc., can be seen at the Vestry Hall, Mitcham.

FEBRUARY 27.—**Fulham.**—SUPPLIES.—Fulham Guardians invite tenders for supplying goods or executing work. Forms of tender, etc., may be obtained on application at office of Mr. E. J. Mott, Clerk to the Guardians, Guardians' Offices, 129, Fulham Palace-road, Hammersmith, W., or by forwarding a stamped addressed foolscap envelope.

FEBRUARY 27.—**Islington.**—ANNUAL CONTRACTS.—Islington B.C. invite tenders for contracts for one year. Forms of tender, etc., may be obtained on application at the Town Hall, Upper-street, N.

FEBRUARY 27.—**Thakeham.**—ROAD MATERIALS.—Thakeham R.D.C. invite tenders for basalt, granite, and flints. Form of tender, etc., may be obtained from Mr. Wm. Forrester, Surveyor, Storrington, Sussex.

FEBRUARY 29.—**Hereford.**—MATERIALS.—The supply of materials in accordance with the general conditions, etc., to be seen at the office of the City Surveyor.

FEBRUARY 29.—**Ruthin.**—ROAD STONE.—Denbighshire C.C. invite tenders for supplying road stone of different gauges. Forms of tender and other particulars apply to Mr. Ellis W. Jones, County Road Surveyor, etc., Wrexham.

FEBRUARY 29.—**South Shields.**—MATERIALS.—The Corporation invite tenders for the supply of materials. Specifications, etc., may be had on application to Mr. S. E. Burgess, M.Inst.C.E., Borough Engineer and Surveyor, Chapter-row, South Shields.

FEBRUARY 29.—**Wimbledon.**—ANNUAL CONTRACTS.—The Corporation invite tenders for the supply and execution of materials, works, etc. Forms of specification, etc., may be obtained on application to the Borough Engineer and Surveyor, Town Hall, Wimbledon.

MARCH 2.—**Croydon.**—PIPES, STORES, ETC.—Croydon B.C. invite tenders for drain pipes, stores, and road materials. Forms obtained at the Borough Road Surveyor's office, Town Hall, Croydon.

MARCH 2.—**Ealing.**—MATERIALS.—Ealing T.C. invites tenders for the supply of:—(1) Limes, pipes, etc.; (2) cement; (3) ironmongery; (4) iron castings, etc.; (5) paints, oils, etc. Printed forms of tender, etc., may be obtained on application to the Borough Surveyor, Mr. Charles Jones, M.Inst.C.E., at his office, Town Hall, Ealing, W.

MARCH 2.—**London.**—MATERIALS.—The C.C. of Middlesex invite tenders for the supply of about 12,000 tons of 2-in. blue Guernsey granite, basalt, or Clee Hill stone, 2,000 tons of ½-in. chippings, and 600 tons of dust. Particulars, etc., may be obtained at offices of Mr. H. T. Wakeham, M.Inst.C.E., County Engineer and Surveyor, Middlesex Guildhall, Westminster, S.W.

MARCH 2.—**London.**—STORES, ETC.—The Metropolitan Water Board invite tenders for the supply of stores and the execution of works. Forms may be obtained from the Clerk, Savoy-court, Strand, W.C., by personal application or on receipt of a stamped addressed envelope.

MARCH 2.—**Wangford.**—ROAD MATERIALS.—Wangford R.D.C. invite tenders for granite, red broken flint, gravel, etc. Forms to be obtained from the Clerk, Mr. F. S. Rix, Beccles.

MARCH 3.—**Woodford.**—GRANITE, ETC.—Woodford U.D.C. invite tenders for the supply of small granite and tar and pitch for tar paving. Particulars and forms of tender may be obtained from Mr. William Farrington, Surveyor to the Council, Council Offices, Woodford Green.

MARCH 4.—**Bingham.**—MATERIALS.—Bingham R.D.C. invite tenders for the supply of materials for the repair of the district roads. Forms to be obtained at office of Mr. R. H. Beaumont, Clerk.

MARCH 5.—**Southend-on-Sea.**—GENERAL STORES.—The Corporation invite tenders for the supply of brooms and brushes. Forms of tender may be obtained upon application to Mr. E. J. Elford, M.Inst.M.E, Borough Surveyor, Southend-on-Sea.

MARCH 6.—**Wrexham.**—SUPPLIES.—Wrexham T.C. invite tenders for materials for Borough Surveyor's Department and for Borough Electrical Engineer's Department. Forms of tender may be obtained on receipt of stamped addressed foolscap envelope, as follows:—The Borough Surveyor, Willow-road; the Borough Electrical Engineer, Willow-road.

MARCH 9.—**Batley.**—MATERIALS.—Batley T.C. invite tenders for the supply of flagstones, setts, paviors, and kerbs; sanitary tubes; pitch and oil; cement, etc. Forms of specification, etc., may be obtained from the Borough Engineer, Mr. Oscar J. Kirby, at his office, Town Hall, Batley.

NO DATE.—**Salford.**—MATERIALS.—Salford Corporation invite tenders for the supply of materials. Specifications, etc., may be obtained at the Borough Engineer's Office, Town Hall, Salford.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*SURVEYOR	Chesl.unt U.D.C.	250*l.*	Feb. 29

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*STOCK OF WALL-PAPER MERCHANT, 143, FULHAM-ROAD—On the Premises	J. T. Skelding	Feb. 17
*MATERIALS OF BLOCK OF SHOPS, ETC., ALDGATE—On the Premises	Horne & Co.	Feb. 19
*WORKS, YARD, AND HOUSE, GOSPORT—Estate Sale Room, Gosport	Llewellyn, Puttock, & Blake	Feb. 20
*SHOP BUILDING PLOTS, FULHAM—Town Hall, Fulham	J. Burman Rosevear & Son	Feb. 25
*LEASE, MACHINERY, STK. OF JNRY. MANUFACTURER, SURBITON—On the Premises	Horne & Co.	March 3
*FREEHOLD PROPERTIES, BATTERSEA, KENSINGTON, CHELSEA, ETC.—At the Mart	Debenham, Tewson, Richardson, & Co.	do.
*FREEHOLD BUILDING LAND, CLAPHAM-PARK—At the Mart	Douglas Young & Co.	March 4
*FREEHOLD LICENSED PROPERTY, SOHO—At the Mart	Farebrother, Ellis, & Co.	March 26

PATENTS.—*Continued from page* 192.

1,268 of 1907.—HEIMSCHUTZ METALLWAREN-FABRIK, G.m.b.H.: *Door-closing Devices.*

This relates to a closing device for swinging doors which operates when the door is swung in either direction, said device being arranged upon the door, and provided with a flat coiled spring combined with a ratchet gear and braking means, said closing device being connected to a fixed point upon the lintel by a series of jointed levers, and being characterised by a casing receiving the spring regulating the closing movement, and rotatable about the spindle of the closing device, being controlled by two stops and a ratchet gear, by the co-operation of which with the corresponding movement of the lever connected to the spindle in one or the other direction the spring already compressed is overwound from the outer or from the inner spring end, whereupon after the release of the door the spring or the casing surrounding the same moves back again to the corresponding stop with simultaneous stopping of the movement, and the door reaches its central or closing position.

1,630 of 1907.—G. P. SKIPWORTH: *Heating Systems.*

This relates to heating systems, in which a mixture of air and expanded steam is circulated by a steam injector, and the admission of steam to the injector is controlled by an adjustable thermostatic device, and consists in so arranging the system that the thermostatic device is influenced solely by the temperature of the return vapours from the heating system, and the air inlet is so located as to communicate directly with the radiating system without influencing the thermostatic device.

3,329 of 1907.—ORME, EVANS, & CO., LTD., and H. A. ORME: *Flushing Apparatus for Use with Water-closets, and the like.*

This relates to flushing apparatus of the type in which the flush is caused by the falling of the siphon bell, and in which openings into the bell a short distance from the lower end thereof allow water to rush therethrough from the cistern when the bell is down, comprising a downward projecting rim around the lower edge of the falling appliance which sets up the siphon action, said rim extending over a portion of the depth of the buffers used to deaden the shock of such appliance as it strikes the bottom of the cistern well.

8,510 of 1907.—D. CAMPBELL and R. GALLOWAY: *Fireplaces.*

This relates to a fireplace comprising the combination therewith of a set of upright front fire bars, with an open-ended vertical slot to receive a bar, a curved rack on each outer bar thereof, right and left, containing incised notches, a removable bottom grate, pivoted at the rear to the fireplace, having a bar projecting forwardly beyond the fire bars, adapted for being pivotally connected (by a removable pin) to a shelf or trivet, also the said shelf or trivet having side prongs to engage with the said curved racks and lugs on its under side, and also a pin to connect the trivet to the projecting grate bar.

13,730 of 1907.—F. TRIER: *Tools and Apparatus for Dressing and Turning Stone, Emery Wheels, and the like.*

This relates to tool and apparatus for dressing, turning, and shaping stone, grindstones, emery and carborundum wheels, and the like, and consists in mounting one or more than one thin metal discs (preferably several thin discs of hardened steel) on a spindle in such a manner that the planes of the discs are inclined to the axis of the spindle with their peripheries lying preferably in the envelope of a cylinder (or cylinders) concentric with the axis, which discs serve for shaping or turning the stone.

14,871 of 1907.—J. DIETL: *Gully Traps and Silt Boxes therefor.*

This relates to a sink with bearings for a pail, and provided with a tongue syphon which can be cleaned from the street, and a pail with movable cover over an arched bottom, characterised by a tongue syphon provided with an opening provided with a cover through which it can be cleaned, the said opening being connected to the street surface by a pipe covered by a cover, so as to clean the syphon as well as the pipes leading to the main sewer or canal at any time, and further characterised by a pail with a movable cover over an arched bottom guided by bent levers, by means of which the bottom of the sink is easily cleaned.

17,173 of 1907.—G. BERNHARDT: *Apparatus for loading and Unloading Brick Trucks or Wagons.*

This relates to an apparatus for loading and unloading brick wagons or trucks, comprising two multiple frames which counterbalance one another, and are adapted to move up and down, and on the loading and unloading of the brick wagon or truck to be brought into such a position that they correspond with the shelves of the truck which passes laterally by the same, and on the loading of a kiln truck are brought to the same height and then simultaneously lowered.

13,768 of 1907.—R. ROSTOCK: *Foundations for Poles, or the like.*

This relates to a foundation for poles or the like characterised by the fact that the socket for the reception of the pole presents a conically recessed bottom, upon which the likewise conical end of the pole rests, and a conically widened mouth joining the cylindrical portion of the socket which surrounds the pole laterally, this mouth serving for the introduction of wedges for holding the pole.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

February 3.—By JONES, SON, & DAY.

Stratford,—59 to 71 (odd), and 73 (s.), Martin-st., u.t. 51 yrs., g.r. 18*l.*, w.r. 183*l.* 12s.... £1,100
9, 11, and 13, Broad-st., and 2A, Cullum-st., f., w.r. 96*l.* 17s..... 620

February 4.—By ROGERS BROS.

Walworth,—95 and 97, East-st., f., y.r. 80*l.*.. 990

February 5.—By T. F. DEASON.

Harlesden,—101, Drayton-rd., u.t. 93 yrs., g.r. 5*l.* 10s., e.r. 28*l.*..... 200
42, Bruce-rd., u.t. 90 yrs., g.r. 6*l.*, w.r. 39*l.*.. 205

By LEOPOLD FARMER & SONS.

Kilburn.—37, Canterbury-rd. (s.), u.t. 51 yrs., g.r. 5s., e.r. 50*l.*..... 300
Hampstead.—71, Iverson-rd., f., y.r. 45*l.*..... 500

By H. E. FOSTER & CRANFIELD.

Clapham.—Hazelbourne-rd., etc., f.g. rents 178*l.* 5s., reversion in 70 yrs..... 4,365

February 6.—By HORNE & CO.

Bayswater.—122 to 138 (even), 142 to 150 (even), Westbourne-gr., u.t. 35¼ yrs., g.r's. 154*l.*, y.r. 954*l.*..... 5,960
152, Westbourne-gr., u.t. 35¼ yrs., g.r. 14*l.*, y.r. 85*l.*..... 565
1 and 3, Norfolk-rd. villas, u.t. 35¼ yrs., g.r. 14*l.* 12s., y. and e.r. 120*l.*..... 690
25, Hereford-rd., u.t. 13¼ yrs., g.r. 5*l.* 10s., y.r. 60*l.*..... 280
Paddington.—19, Porteus-rd., u.t. 31¼ yrs., g.r. 7*l.*, y.r. 45*l.*..... 325
70, 74, and 80, Harrow-rd., u.t. 31¼ yrs., g.r. 18*l.*, w.r. 210*l.*..... 965

By STIMSON & SONS.

Finchley.—Elmfield-rd., f.g. rents 99*l.*, reversion in 91 yrs..... 2,160
Dalston.—54, Balls Pond (The Marquis of Salisbury p.h.). f.g.r. 30*l.*, reversion in 43 yrs..... 1,685
Peckham. — Choumert-rd., etc., f.g. rents 18*l.* 18s., reversion in 72 yrs..... 490
Beckenham.—Parish-la., f.g.r. 15*l.*, reversion in 62 yrs..... £330
Brixton.—315, Brixton-rd.. u.t. 63 yrs., g.r. 20*l.*, y.r. 75*l.*..... 360

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for office; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

Letters or communications (beyond mere news items) which have been duplicated for other journals are NOT DESIRED.

All communications must be authenticated by the name and address of the sender whether for publication or not. No notice can be taken of anonymous communications.

We are compelled to decline pointing out books and giving addresses.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance. The Editor cannot undertake to read and consider articles offered for acceptance unless they are type-written.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and *not* to the Editor.

MEETINGS.

FRIDAY, FEBRUARY 14.

Glasgow Architectural Craftsmen's Society.—Mr. D. M. Kellar on "Building as it is generally done." 8 p.m.

Edinburgh Architectural Association. — Associates' annual dinner.

SATURDAY, FEBRUARY 15.

Royal Institution.—Mr. Selwyn Brinton, M.A., on "The Art of Florence."—I. 3 p.m.

Incorporated Clerks of Works Association.—Twenty-fifth annual dinner at the Hotel Cecil. 6 p.m.

MONDAY, FEBRUARY 17.

Royal Institute of British Architects.—Mr. Francis Fox, M.Inst.C.E., on "Foundations: the Use of Divers and the Grouting Machine," with lantern illustrations. 8 p.m.

Institute of Sanitary Engineers.—Mr. H. G. Turner on "The Collection and Storage of Water for Domestic Purposes in Connexion with Farm-Houses and Villages" (Bronze Medal Essay). 8 p.m.

Liverpool Architectural Society.—Mr. E. Willoughby Faulkner on "Holland," sketches and lantern slides.

University of London (South Kensington).—Mr. Banister Fletcher on "The Monastic Cathedrals of Canterbury, Durham, etc." 8 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. H. Hardinge Cunynghame, C.B., on "The Theory and Practice of Clockmaking."—Lecture V. 8 p.m.

TUESDAY, FEBRUARY 18.

Institution of Heating and Ventilating Engineers (Incorporated).—Annual general meeting, at the hall of the Institution of Mechanical Engineers, Storey's Gate, London, S.W. (1) Presidential address by Mr. A. B. Simpson, M.I.Mech.E. (2) Paper on "The Heating and Ventilation of School Buildings," as presented by Mr. W. Nelson Haden, J.P., M.I.Mech.E., before the Second International Congress on School Hygiene, August 8, 1907. (3) Paper by Mr. W. H. Casmey on "Warming and Ventilation," awarded second prize in the Assistants' Prize Competition, 1906-7. 6.30 p.m.

Royal Society of Arts (Applied Art Section).—Mr. George W. Eve on "Banners in Pageantry." Mr. Walter Crane, R.W.S., will preside. 8 p.m.

Institution of Civil Engineers.—Mr. J. J. Prest on "Shaft-sinking at the Horden Colliery, South-east Durham." 8 p.m.

Society for the Promotion of Hellenic Studies.—Mr. Louis Dyer and Mr. E Norman Gardiner will read illustrated papers on "The θέατρον at Olympia." 5 p.m.

WEDNESDAY, FEBRUARY 19.

Architectural Association Camera and Cycling Club.—Professor Beresford Pite on "Domed Churches." 7.30 p.m.

London Master Builders' Association (Carpenters' Hall, London Wall).—Annual dinner. 6.30 p.m.

Edinburgh Architectural Association.—Mr. J. Campbell Mitchell, A.R.S.A., on "Colour." 8.p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 8.p.m.

Royal Society of Arts.—Mr. W. Martin, M.A., LL.D. on "The Law of Treasure Trove." 8 p.m.

THURSDAY, FEBRUARY 20.

Carpenters' Hall, London Wall.—Professor W. H. Wagstaff, M.A., on "Optical Illusions." 8 p.m.

Royal Institution.—Professor W. Somerville, M.A., D.Sc., on "Wood, its Botanical and Technical Aspects."—I. 3 p.m.

Institution of Electrical Engineers.—(1) Mr. H. Henderson on "Electrical Power in Railway Goods Warehouses." (2) Mr. C. E. Taylor on "Electric Power in Docks." 8 p.m.

Junior Institution of Engineers (Royal United Service Institution, Whitehall).—Paper on "Practical Notes on the Testing of Gas Engines," by Mr. Gilbert Whalley. 8 p.m.

FRIDAY, FEBRUARY 21.

Architectural Association.—Mr. Edward Warren on "Oxford." 7.30 p.m.

Royal Institution.—Sir Oliver Lodge on "The Ether of Space." 9 p.m.

Institution of Civil Engineers (Students' Meeting).—Mr. Gerald O. Case on "Currents as a Cause of Coast-Erosion." 8 p.m.

Royal Academy of Arts.—Viscount Dillon on "Arms and Armour in Painting and Sculpture." 4 p.m.

SATURDAY, FEBRUARY 22.

Royal Institution.—Mr. Selwyn Brinton, M.A., on "The Art of Florence."—II. 3 p.m.

Junior Institution of Engineers.—Visit to King's College, Strand, for inspection of Experimental Apparatus, etc. 3 p.m.

PRICES CURRENT OF MATERIALS.

***** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.**

BRICKS, &c.

	£ s. d.	
Hard Stocks.....	1 6 0	per 1000 alongside, in river.
Rough Stocks and Grizzles	1 5 0	,, ,, ,,
Picked Stocks for Facings	2 10 0	,, delivered.
Flettons.....	1 5 6	,, at railway depot.
Red Wire Cuts ...	1 14 0	,, ,, ,,
Best Fareham Red	3 12 0	,, ,, ,,
Best Red Pressed Ruabon Facing..	5 0 0	,, ,, ,,
Best Blue Pressed Staffordshire ...	3 15 0	,, ,, ,,
Do. Bullnose	4 0 0	,, ,, ,,
Best Stourbridge Fire Bricks	3 14 0	,, ,, ,,
GLAZED BRICKS.		
Best White and Ivory Glazed Stretchers	12 0 0	,, ,, ,,
Headers.....	11 0 0	,, ,, ,,
Quoins, Bullnose, and Flats	16 0 0	,, ,, ,,
Double Stretchers	19 0 0	,, ,, ,,
Double Headers...	16 0 0	,, ,, ,,
One Side and two Ends	19 0 0	,, ,, ,,
Two Sides and one End.....	20 0 0	,, ,, ,,
Splays, Chamferred, Squints..	20 0 0	,, ,, ,,
Best Dipped Salt Glazed Stretchers, and Header.	12 0 0	,, ,, ,,
Quoins, Bullnose, and Flats	14 0 0	,, ,, ,,
Double Stretchers	15 0 0	,, ,, ,,
Double Headers ...	14 0 0	,, ,, ,,
One Side and two Ends	15 0 0	,, ,, ,,
Two Sides and one End	15 0 0	,, ,, ,,
Splays, Chamferred, Squints..	14 0 0	,, ,, ,,
Second Quality White and Dipped Salt Glazed	2 0 0	,, less than best.

	s. d.	
Thames and Pit Sand	6 6	per yard, delivered.
Thames Ballast	5 0	,, ,,
Best Portland Cement	30 0	per ton, ,,
Best Ground Blue Lias Lime	19 6	,, ,,

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime .....12s. 0d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

	s. d.	
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½	per ft. cube.
Do. do. delivered on road waggons, Nine Elms Depôt.....	1 8½	,, ,,
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf...	2 1	,, ,,
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf ...	2 2½	,, ,,

	s. d.	
Ancaster in blocks.....	1 10	per ft. cube, deld. rly. depôt.
Beer ,, ...	1 6	,, ,,
Greenshill ,, ...	1 10	,, ,,
Darley Dale in blocks ...	2 4	,, ,,
Red Corsehill ,, ...	2 2	,, ,,
CloseburnRed Freestone	2 0	,, ,,
Red Mansfield ,,	2 4	,, ,,
YORK STONE—*Robin Hood Quality*		
Scappled random blocks.	2 10	,, ,,
6 in. sawn two sides landings to sizes (under 40 ft. super.).....	2 3	per ft. super., ,,
6 in. rubbed two sides ditto, ditto	2 6	,, ,,
3 in. sawn two sides slabs (random sizes).....	0 11½	per ft. cube, ,,
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7½	,, ,,
1½ in. to 2 in. ditto, ditto	0 6	,, ,,
HARD YORK—		
Scappled random blocks	3 0	,, ,,
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 8	per ft. super. ,,
6 in. rubbed two sides ditto	3 0	,, ,,
3 in. sawn two sides slabs (random sizes).....	1 2	,, ,,
2 in. self-faced random flags	0 5	,, ,,

SLATES.

In.	In.		£	s.	d.		
20×10	best blue Bangor		13	2	6	per 1000 of 1200 at r. d.	
20×12	"	"	13	17	6	"	"
20×10	first quallty,,		13	0	0	"	"
20×12	"	"	13	15	0	"	"
16×8	"	"	7	5	0	"	"
20×10	best blue Portmadoc		12	12	6	"	"
16×8	"	"	6	12	6	"	"
20×10	best Eureka unfading green		15	17	6	"	"
20×12	"	,, ...	18	7	6	"	"
18×10	"	,, ...	13	5	0	"	"
16×8		,, ...	10	5	0	"	"
20×10	permanent green		11	12	6	"	"
18×10	"	"	9	12	6	"	"
16×8	"	"	6	12	6	"	"

TILES.

	s.	d.	
Best plain red roofing tiles...	42	0	per 1000 at rly.depôt.
Hip and Valley tiles ...	3	7	per doz. "
Best Broseley tiles	50	0	per 1000 "
Do. Ornamental tiles	52	6	" "
Hip and Valley tiles ...	4	0	per doz. "
Best Ruabon red, brown, or brindled do. (Edwards) ...	57	6	per 1000 "
Do. Ornamental do.....	60	0	" "
Hip tiles	4	0	per do.. "
Valley tiles	3	0	" "
Best Red or Mottled Staffordshire do. (Peakes).....	51	9	per 1000 "
Do. Ornamental do.....	54	6	" "
Hip tiles	4	1	per doz. "
Valley tiles.....	3	8	" "
Best "Rosemary" brand plain tiles	48	0	per 1000 "
Best Ornamental tiles.....	50	0	" "
Hip tiles	4	0	per doz. "
Valley tiles.....	3	8	" "
Best "Hartshill" brand plain tiles, sand-faced	50	0	per 1000 "
Do. pressed.....	47	6	" "
Do. Ornamental do.....	50	0	" "
Hip tiles	4	0	per doz. "
Valley tiles.....	3	6	" "

WOOD.

Building Wood.	At per standard.					
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.....	£ 13	s. 10	d. 0	...	£ 15	s. d. 0 0
Deals: best 3 by 9	13	0	0	...	14	0 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	0	0	...	12	0 0
Battens: best 2½ by 6 and 3 by 6...	0	10	0	less than 7 in. and 8 in.		
Deals: seconds.....	1	0	0	less thu best.		
Battens: seconds.....	0	10	0	"	"	
2 in. by 4 in. and 2 in. by 6 in....	9	0	0	...	10	0 0
2 in. by 4½ in. and 2 in. by 5 in...	8	10	0	...	9	10 0
Foreign Sawn Boards—						
1 in. and 1½ in. by 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0	"		
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 4 10 0			...	5	0 0
Seconds	4	0	0	...	4	10 0
Small timber (8 in. to 10 in.) ...	3	12	6	...	3	15 0
Small timber (6 in. to 8 in.).....	3	0	0	...	3	10 0
Swedish balks	2	10	0	...	3	0 0
Pitch-pine timber (30 ft. average)	4	0	0	...	4	15 0

Joiners' Wood.	At per standard.					
White Sea: first yellow deals, 3 in. by 11 in.....	24	0	0	...	25	0 0
3 in. by 9 in.	22	0	0	...	23	0 0
Battens, 2½ in. and 3 in. by 7 in.	16	10	0	...	18	0 0
Second yellow deals, 3 in. by 1 in.	18	10	0	...	20	0 0
" " 3 in. by 9 in.	17	10	0	...	19	0 0
Battens, 2½ in. and 3 in. by 7 in.	13	10	0	...	14	10 0
Third yellow deals, 3 in. by 11 in. and 9 in.	13	10	0	...	15	0 0
Battens, 2½ in. and 3 in. by 7 in.	11	0	0	...	12	0 0
Petersburg first yellow deals, 3 in. by 11 in.....	21	0	0	...	22	10 0
Do. 3 in. by 9 in.	18	0	0	...	19	10 0
Battens	13	10	0	...	15	0 0
Second yellow deals, 3in. by 11in.	16	0	0	...	17	0 0
Do. 3 in. by 9 in.	14	10	0	...	16	0 0
Battens	11	0	0	...	12	10 0
Third yellow deals, 3 in. by 11 in.	13	0	0	...	14	0 0
Do. 3 in. by 9 in.....	12	10	0	...	14	0 0
Battens	10	0	0	...	11	0 0
White Sea and Petersburg—						
First white deals, 3 in. by 11 in.	14	10	0	...	15	10 0
" " 3 in. by 9 in	13	10	0	...	14	10 0
Battens.....	11	0	0	...	12	0 0
Second white deals, 3in. by 11 in.	13	10	0	...	14	10 0
" " 3 in. by 9 in.	12	10	0	...	13	10 0
" " battens	10	0	0	...	11	0 0
Pitch-pine: deals.....	18	0	0	...	21	0 0
Under 2 in. thick extra	0	10	0	...	1	0 0
Yellow pine—First, regular sizes	44	0	0	upwards.		
Oddments	32	0	0	"		
Seconds, regular sizes	33	0	0	"		
Yellow Pine oddments	28	0	0	"		
Kauri Pine—Planks, per ft. cube..	0	3	6	...	0	5 0
Danzig and Stettin Oak Logs—						
Large, per ft. cube	0	3	0	...	0	3 6
Small " "	0	2	6	...	0	2 9
Wainscot Oak Logs, per ft. cube..	0	5	6	...	0	6 0
Dry Wainscot Oak, per ft. sup. as inch	0	0	8½	...	0	0 9½
¾ in. do. do.	0	0	7	...		—
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch...	0	0	9	...	0	1 0
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2 6
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1 0
Teak, per load	17	0	0	...	22	0 0
American Whitewood Planks, per ft. cube.....	0	4	0	...	0	5 0

WOOD (*continued*).

Joiners' Wood (*continued*)— Prepared Flooring, etc.—	Per square. £	s.	d.		£	s.	d.
1 in. by 7 in. yellow, planed and shot	0	13	6	...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. " "	0	14	0	...	0	18	0
¾ in. by 7 in. white " "	0	10	0	...	0	11	6
1 in. by 7 in. " "	0	12	9	...	0	15	0
6 in. at 6d. to 9d. per square less than 7 in.							

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections	7	10	0	...	8	0	0
Compound Girders, ordinary sections	9	10	0	...	10	10	0
Steel Compound Stanchions	12	0	0	...	13	0	0
Angles, Tees, and Channels, ordinary sections	9	10	0	...	10	10	0
Flitch Plates	9	10	0	...	10	10	0
Cast Iron Columns and Stanchions including ordinary patterns.....	8	0	0	...	9	0	0

METALS.

Iron—	Per ton, in London. £	s.	d.		£	s.	d.
Common Bars	8	10	0	...	9	0	0
Staffordshire Crown Bars, good merchant quality	8	15	0	...	9	5	0
Staffordshire "Marked Bars" ...	10	10	0	...	—		
Mild Steel Bars	8	15	0	...	9	5	0
Hoop Iron, basis price	9	5	0	...	9	10	0
" " Galvanised	17	0	0	...	—		
(*And upwards, according to size and gauge.)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	9	15	0	...	—		
" " 24 g.	10	15	0	...	—		
" " 26 g.	12	5	0	...	—		
Sheet Iron, Galvanised, flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.....	15	0	0	...	—		
Ordinary sizes to 22 g. and 24 g.	15	10	0	...	—		
" " 26 g.	16	10	0	...	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	18	0	0	...	—		
" " 22 g. and 24 g.	18	10	0	...	—		
" " 26 g.	20	0	0	...	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	14	10	0	...	—		
" " 22 g. and 24 g.	14	15	0	...	—		
" " 26 g.	16	5	0	...	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. by 20 g. and thicker	12	0	0	...	—		
Best Soft Steel Sheets, 22 g. & 24 g.	13	0	0	...	—		
" " " 26 g.	15	0	0	...	—		
Cut Nails, 3 in. to 6 in.	10	10	0	...	11	0	0
(Under 3 in., usual trade extras.)							

LEAD, &c.

	Per ton, in London. £	s.	d.		£	s.	d.
Lead—Sheet, English, 3lb. and up.	17	15	0	...	—		
Pipe in coils	18	5	0	...	—		
Soil pipe	20	15	0	...	—		
Compo pipe.....	21	15	0	...	—		
Zinc—Sheet—							
Vieille Montague ....ton	28	0	0	...	—		
Silesian.....	27	15	0	...	—		
Copper—							
Strong Sheet.....per lb.	0	1	1	...	—		
Thin " ..... "	0	1	2	...	—		
Copper nails ..... "	0	0	11	...	—		
Copper wire ..... ,,	0	0	10	...	—		
Brass—							
Strong Sheet .... "	0	1	0	...	—		
Thin..... "	0	1	1	...	—		
Tin—English Ingots..... "	0	1	4	...	—		
Solder—Plumbers' ..... "	0	0	7	...	—		
Tinmen's ..... "	0	0	9	...	—		
Blowpipe ..... "	0	0	11	...	—		

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

15 oz. thirds	2½d. per ft. delivered.
" fourths	1⅞d. " "
21 oz. thirds	3½d. " "
" fourths.....	2½d. " "
26 oz thirds	4½d. " "
" fourths	3½d. " "
32 oz. thirds	5d. " "
" fourths.....	4½d. " "
Fluted Sheet, 15 oz.....	3½d. " "
" 21 oz.	4½d. " "

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

⅛ Hartley's	2½d. per ft. delivered.
3/16 "	2½d. " "
¼ "	3d. " "
Figured and Oxford Rolled "Oceanic" Glass, white	4d. " "
Do. " tinted ...	5½d. " "

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	1
" " " in barrels	"	0	2	2
" " " in drums	"	0	2	3
Boiled ,, " in pipes	"	0	2	2
" " " in barrels	"	0	2	3
" " " in drums	"	0	2	4
Turpentine in barrels	"	0	3	3
" in drums	"	0	3	5
Genuine Ground English White Lead	per ton	22	10	0
Red Lead, Dry	"	22	0	0
Best Linseed Oil Putty	per cwt.	0	7	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak.....	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak.....	0	10	0
Superfine Hard-drying Oak, for seats of Churches.....	0	14	0
Fine Elastic Carriage	0	12	6
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	16	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Copal Enamel.....	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size.....	0	10	6
Best Black Japan	0	16	0
Oak and Mahogany Stain.....	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	9
French and Brush Polish.....	0	10	6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building-owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.*, unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* † Denotes *provisionally accepted.*

ASHTON-IN-MAKERFIELD.—For erecting a dining-room and covered play-shed at the Grammar-school, for the governors, Mr. F. Rose, architect, Council Offices, Ashton-in-Makerfield:—

R. A. Smith	£554 10	Kennsley & Gee..	£489 10
J. Johnson & Son	548 0	Hilton & Ince....	489 0
W. A. Bywater ..	539 0	J. Watson	477 10
I. & H. Houghton	519 0	A. Pennington, Ashton*	461 0
H. & J. Lomax..	510 0		

BARKING.—For West of Roding drainage, for Barking Town Urban District Council. Mr. C. F. Dawson, Surveyor, Public Offices, Barking:—

Construction of Sewer and Ejector Chamber, etc.
J. Jackson, Broadway, Plaistow, Essex*. £433 2 3

Engineering Works (Supply of Pneumatic Ejectors, Air-Main, etc.).
Hughes & Lancaster, Westminster, S.W.* £535 6 10

CARLISLE.—For erecting outside iron staircases to hospital, Fusehill Workhouse, for the Guardians. Mr. G. Armstrong, architect, 24, Bank-street, Carlisle:—

Ironwork: Pratchitt Bros., Denton Iron-works Carlisle* £55 0
Doors, etc.: Reeves, Stanwix* 29 13

CHADDERTON.—For the construction of earthen-ware-pipe sewers, etc., for the sewerage of Mill Brow and Throstle-walk, for the Urban District Council. Messrs. J. Diggle & Son, engineers, Hind Hill-street, Heywood, and Victoria-street, Westminster, S.W.:—

Macdonald & Deakin	£761 18 6	R. Heard	£586 1 3
R. Lomax.....	744 6 6	G. Freeman & Sons	581 4 1
S. Johnson & Sons	631 2 6	R. Turner, Heywood*	571 15 6
J. Berry	624 5 5		
R. Partington & Son	617 3 6		

CLACTON-ON-SEA.—For the erection of Petty Sessional Court House, etc., for the Standing Joint Committee of the Court of Quarter Sessions and County Council of Essex. Mr. Frank Whitmore, County Architect, Chelmsford:—

A. R. Canler	£2,542	E. Saunders	£2,115
J. Parren & Son ..	2,370	J. S. Hammond & Son	2,092
H. Potter & Son ..	2,275	F. & E. Davey	2,075
H. Smith	2,243	Everitt & Son	2,044
G. Grimwood & Sons	2,195	S. A. Kenney.....	1,985
R. Beaumont.....	2,160	F. & A. Willmott, Ilford*	1,893
Spencer, Santo, & Co.	2,150		
F. Bennett.....	2,125		

CONWAY.—For a 6-in. water main at Deganwy, for the Corporation. Mr. F. A. De Lamotte, Borough Surveyor:—

E. R. Lester ..	£580 0 0	R. Prichard....	£405 9 7
R. Williams....	482 14 9	J. & D. W. Jones, Chapel-street, Conway*	396 12 4
J. E. Hughes ..	472 12 8		
R. O. Prichard...	417 0 0		

COVENTRY.—For alterations to Messrs. Peter's Wharf, Foleshill-road, Coventry. Messrs. Tait & Herbert, architects, Leicester and Coventry:—

For Electric Hoist and Transporter.
Waygood & Co., Ltd.* £176 10
Constructional Steelwork.
Needham & Lowe..... 64 5
Gimson & Co., Ltd., Leicester* 62 4

CROSBY (Lincolnshire).—For the erection of six dwelling houses and business premises for the Scunthorpe Mutual Co-operative Society, Ltd. Mr. W. H. Buttrick, architect, Scunthorpe:—

F. Scarborough ..	£3,444	Parnell	£2,535
W. Pallister	2,850	H. J. Thompson, Scunthorpe*	2,320
T. H. Atkinson ..	2,799	Whitfield	2,155
Quible	2,545		

DOVERCOURT.—For the erection of the second portion of Congregational Church, Cliff-road, for the Building Committee, Congregational Church, Dovercourt. Mr. H. H. Packer, architect, Dovercourt. Quantities by architect:—

G. Grimwood & Sons	£2,139	H. J. Linzell	£1,845
Stephens, Bastow, & Co., Ltd.....	1,975	E. Saunders	1,765
S. A. Kenney.....	1,950	G. A. Kenney	1,749
F. Bennett.....	1,850	Spencer, Santo, & Co., Ltd.....	1,690

DRIFFIELD (York).—For erecting a motor garage at Driffield, for Messrs. G. Dowson & Son. Mr. J. Shepherdson, architect, Lockwood-street, Driffield :—

C. W. Dry	£372 0	W. Leason & Son	
A. H. Berry	348 0	Driffield	*‡ £310 0
M. Gage	312 17		

‡ Exclusive of iron roof.

EAST KIRKBY.—For sinking well and driving headings at waterworks, for Kirkby-in-Ashfield Urban District Council. Messrs. Elliott and Brown, Engineers, Burton-buildings, Parliament-street, Nottingham :—

A. E. Nunn, Blomfield-street, E.C.* £2,577 16 8

EXETER.—For painting and general reparation at 4, Higher Summerlands, for the Guardians, Mr. R. M. Challice, architect, 14, Bedford-circus, Exeter :—

J. Holland, Sidwell-street, Exeter* £60

FALMOUTH.—For erecting nine houses on the Bar-road, for the executors of the late Mr. Aaron Smith. Mr. H. E. Tressider, architect, 23, Church-street, Falmouth :—

W. E. Bennett	£3,066	E. H. Moss	£2,493
W. T. Kelway	2,880	J. Williams, Falmouth*	2,350
T. J. Pye	2,600		

FOLKESTONE.—For the erection of an elementary school in Chart-road, for the Corporation. Mr. F. Newman, Architect and Surveyor, 4, Bouverie-square, Folkestone :—

S. T. Birfield	£13,246	F. W. & J. Clark	£11,490
J. Gosby	13,200	A. S. Ingleton	11,454
F. E. Crosswell	13,069	O. Marx	11,427
W. J. Adcock & Son	12,300	J. G. Parsons	11,250
E. J. Bowles	11,950	D. Baker	11,200
S. Vart	11,852	G. Lewis & Sons	10,895
R. Webster	11,840	G. E. Wallis & Sons, Ltd.	10,836
G. Bowring	11,592	G. Castle & Son	10,770
Sturry Building Co.	11,550	Hayward & Paramor, Folkestone*	10,649
Ellis Bros.	11,548		
E. W. Holroyd	11,541		
G. H. Denne & Son	11,495		

[The Council subsequently amended the specification and accepted the lowest tender (Hayward & Paramor) for £8,203.]

FORMBY.—For remaking-up part of Duke-street, for the Urban District Council. Mr. A. W. Pattison, Surveyor, Council Offices, Formby :—

R. Ball	£781 11 11	W. Owen	£579 9 6
Tarmac, Ltd.	779 16 11	W. H. Stansbury & Co.	560 0 0
R. Chadwick	631 14 2	H. Ellison	558 9 11
Northern Quarries	616 8 8	Bannister & Orret	541 18 5
F. Ireland	604 1 10	North Wales Asphalt Co.	532 11 0
J. & J. Gilbertson	600 0 0		
W. Shepherd & Sons	592 8 6		

GRIMSBY.—For erecting a model lodging house and shop in King Edward-street, North, for Mr. C. H. Hertzberg. Mr. J. J. Cresswell, A.R.I.B.A., 77, Victoria-street, Grimsby :—

Towle Bros.	£868 0 0	W. Kirton	£810 13 9
H. & E. Smith	848 0 0	Hewing & Goodhand, Eleanor-st., Grimsby*	799 0 0
G. & J. Smith	840 18 11		
T. S. Larder	835 0 0		
R. G. Kitching	830 0 0		

LEICESTER. — For two houses, Ashfield-road, Leicester, for Mr. J. E. Pickard. Messrs. Tait & Herbert, architects and surveyors, 18, Friar-lane, Leicester, and 19, Hertford-street, Coventry :—

H. Herbert & Sons	£1,833 0
Bowles & Son	1,789 0
A. & W. Chambers	1,769 0
J. Bentley & Co.	1,734 0
Tyers & Yates	1,695 0
Clarke & Garrett	1,676 0
J. Hutchinson & Son	1,663 17
Marston & Son	1,648 0
F. Elliott*	1,647 0

[All of Leicester.]

LITTLE AMWELL.—For works at sewage farm, for the Hertford Rural District Council. Mr. J. W. Riggs, surveyor, 3, Port Vale-terrace, Hertford :—

H. Fitch, Hertford Heath, Hertford £94

LONDON.—Accepted tenders for supply of limes, cement, bricks, pipes, etc., for twelve months, for the St. Pancras Borough Council :—

	At per ton. s. d.
Lawford & Sons, for grey stone lime (lump)	18 0
Lawford & Sons, for Stourbridge fireclay (ground)	21 0
Broad & Co., for Portland cement	22 3
	At per 1,000.
Broad & Co., for blue bricks (unpressed)	£2 12 6
Leeds Fireclay Co., for blue bricks (pressed and radiated)	3 0 0
Leeds Fireclay Co., Stourbridge firebricks	3 12 6
Rushden Brick Co., Rushden wire cuts	1 10 0

J. Knowles & Co., for pipes, bends, etc., 65 per cent. under standard price list; for closet pans and traps (London County Council pattern), 3s. each; for Winser interceptors, 6-in. diameter, 4s. 4½d. each; Winser, 4-in. diameter, 3s. 3½d. each; for stoneware yard gullies, 1s. 7½d. each; for stoneware back or side inlets, 2s. 1½d. each.

LONDON.—For steel work in connexion with extension of the Clero Crushing Machines at Manor Place Depot, for Southwark Borough Council :—

Homan & Rodgers	£328 3 6
Drew, Bear, Perks & Co., Ltd.	276 16 10
Measures Bros., Ltd.	269 0 11
Dorman, Long & Co., Ltd.*	268 0 6

LONDON. — For rebuilding shop premises, 185, Kensington High-street, W., for Mr. Chas. Lorberg. Mr. Arthur Bond, architect and surveyor, Bush-lane House, Cannon-street, E.C. Quantities by Mr. P. Geo. Bare, 7, John-street, Adelphi, W.C. :—

Holland & Hannen	£3,975	Ford & Walton	£3,750
Holloway Bros.	3,940	F. G. Minter	3,699
Holliday & Greenwood	3,900	Leslie & Co.	3,685
J. Carmichael	3,850	C. F. Kearley	3,585
F. & F. H. Higgs	3,785	Ashby Bros.	3,499
		J. Greenwood, Ltd.	3,346

[Architect's estimate, £3,400.]

LONDON.—For additional accommodation, Napier-street School, Hoxton, for the London County Council :—

T. G. Hawkins	£740	Staines & Son	£625
C. R. Price	673	McCormick & Sons	616
J. Grover & Son	646	A. E. Symes	615
G. S. S. Williams & Son	645	H. C. Horswill	590
J. Willmott & Sons	639	Newell & Lusty	550
W. Silk & Son	637	Stevens & Sons, Yonge-park*	541
E. Lawrance & Sons	633		

[The estimate of the Architect (Education), comparable with the tenders, is £550.]

LONDON.—For heating, Rhyl-street School, St. Pancras, N., for the London County Council :—

T. S. Knight & Sons* £259

LONDON.—For travelling crane, Shad Thames pumping station, for the London County Council :—

T. Smith & Sons, Rodley*	£415	Applebys, Ltd.	£404
J. Booth & Bros., Ltd.	410	Isles, Ltd.	394

LONDON.—For the erection of Caledonian-road fire-station, for the London County Council :—

C. Wall, Ltd.	£7,976
Spencer, Santo, & Co., Ltd.	7,880
Holloway Bros. (London), Ltd.	7,720
E. Lawrance & Sons	7,692
J. Carmichael	7,594
Patman & Fotheringham, Ltd	7,435
H. L. Holloway	7,383
Kirk & Randall	7,343
G. Munday & Son	7,323
Works Committee's estimate*	7,128

[The Architect's revised estimate was £7,250.]

LONDON.—For repair of sewer in Façade, Wilton-road, for Westminster City Council :—

	Reconstruction of sewer.	Relaying sewer connexion
C. W. Killingback, & Co.	£219 0 0	£12 0 0
J. Ewart	210 0 0	14 0 0
J. Mowlem, & Co.	179 0 0	11 0 0
D. R. Paterson, Ltd.*	118 14 0	5 10 0

LONDON.—Accepted tenders for supply of gravel and other roadway materials for twelve months, for the St. Pancras Borough Council :—

	At per cubic yard. s. d.
H. Boyer, for loam	6 0
J. Latter, for clean rough gravel	6 5
J. Abrahams, for river ballast	5 5
W. Cory & Sons, for river sand, ¼ in.-mesh	7 2
J. Latter, for pit sand	6 0
W. Boyer & Sons, for pit sand, screened and washed	6 9
J. Abrahams, for fine river ballast, ¾-in. mesh	6 6
J. Abrahams, for fine river ballast, ½-in. mesh	7 0
Exors. of J. Walker, for pit flints	7 9

LONDON.—Annual accepted tenders for the supply for twelve months of granite kerbs, setts, broken granite, etc., for St. Pancras Borough Council :—

J. Mowlem & Co., for 12 in. by 8 in. Aberdeen, etc., straight kerb, at 1s. 9d. per lin. ft.; for 12 in. by 8 in. Aberdeen, etc., flat circular kerb, at 2s. per lin. ft.; for 6 in. by 12 in. Guernsey straight edge kerb, at 1s. 6d. per lin. ft.; for 6 in. by 12 in. Guernsey circular edge kerb, at 1s. 8d. per lin. ft.; for 12 in. by 8 in. Guernsey flat circular kerb, at 2s. 1d. per lin. ft.; for 6 in. by 12 in. Aberdeen, etc., straight edge kerb, at 1s. 6½d. per lin. ft.; for 6 in. by 12 in. Aberdeen, etc., circular kerb, at 1s. 9½d. per lin. ft.

A. & F. Manuelle, for 6 in. by 12 in. Norwegian granite straight edge kerb, at 1s. 5½d. per lin. ft.; for 6 in. by 12 in. Norwegian granite circular edge kerb, at 1s. 9½d. per lin. ft.

W. Griffiths & Co., for Guernsey, etc., angle blocks, 24 in. radius, at 8s. 3d. each; for new Markfield or Mount Sorrell granite paving setts, 3 in. by 6 in., at 34s. per ton.

Enderby & Stoney-Stanton Granite Co., for Enderby or Stoney-Stanton paving setts, at 3 in. by 6 in. at 28s. 8d. per lin. ft.

J. Mowlem & Co., for Guernsey, etc., paving setts, at 5 in. by 7 in., at 24s. per lin. ft.; for broken blue Guernsey granite, at 14s. 9d. per cub. yd.; for broken Bardon Hill granite at 15s. 2d. per cub. yd.; for broken Mount Sorrell granite, at 14s. 9d. per cub. yd.; for broken Markfield granite, at 15s. 2d. per cub. yd.; for broken granite, 1-in. ring, at 12s. 6d. per cub. yd.

W. Griffiths & Co., for Guernsey granite siftings, ¾-in. mesh, at 10s. per cub. yd.

Whitwick Granite Co., for Leicestershire granite siftings, ¾-in. mesh, at 9s. 11d. per cub. yd.; for ditto, screened, at 9s. 11d. per cub. yd.

W. H. Bensted & Son, Kentish rag stone, 2-in. ring, at 10s. 9d. per cub. yd.

LONDON.—For reconstruction of Caledonian-road and Seven Sisters-road tramways (supply of low-tension electric cables), for the London County Council :—

Union Cable Co., Ltd.	£4,768 18 10
W. T. Glover & Co., Ltd.	4,401 16 11
Callender's Cable & Construction Co., Ltd.	4,148 16 3
W. T. Henley's Telegraph Works Co., Ltd.	4,118 16 10
Siemens Bros. & Co., Ltd.	4,093 17 9
Western Electric Co.	4,070 2 2
British Insulated & Helsby Cables, Ltd.	4,056 18 3
Johnson & Phillips, Ltd., Charlton*	4,020 18 4

LONDON.—Accepted tenders for supply of York paving and artificial paving slabs for twelve months, for St. Pancras Borough Council :—

Brooks & Brooks, for 2½ in. York paving at 5s. 8d. per sq. yd.; for 2½ in. York paving, not exceeding 30 in. by 48 in., at 5s. 8d. per sq. yd.; for 4 in. York landings, at 10s. per sq. yd.

G. A. Watson & Co., Ltd., for 2½ in. natural flag stone paving (Shamrock), at 5s. 9d. per sq. yd.; for 2½ in. natural flag stone paving (Shamrock), not exceeding 30 in. by 48 in., at 5s. 9d. per sq. yd.

J. Ellis & Sons, Ltd., for 2 in. new artificial paving slabs, at 3s. 5d. per sq. yd.

LONDON.—For special school, Beresford-street, Newington, W. (for the accommodation of eighty physically defective children and sixty mentally defective elder boys), for the London County Council :—

Rice & Son	£6,060 0 0
E. P. Bulled & Co.	5,767 0 0
J. Marsland & Sons	5,591 10 0
W. Downs	5,585 0 0
W. Smith & Son	5,580 0 0
H. L. Holloway	5,569 0 0
J. Garrett & Son	5,413 0 0
J. Appleby & Sons	5,300 0 0
Holliday & Greenwood, Ltd.	5,222 0 0
L. Whitehead & Co., Ltd.	5,200 0 0
J. & C. Bowyer	5,169 0 0
E. Triggs	5,063 0 0
T. D. Leng	5,061 0 0
F. & E. Davey, Ltd.	5,022 3 0
Galbraith Bros., Camberwell-green Works‡	4,949 16 0

‡ Recommended for acceptance.

[The estimate of the Architect (Education), comparable with the tenders, is £5,040.]

LONDON.—For the erection of a school for 612 children on the Hotham-road site (Wandsworth), for the London County Council :—

Spencer, Santo, & Co., Ltd.	£15,697 0 0
J. Longley & Co.	15,388 0 0
Martin, Wells, & Co., Ltd.	14,365 0 0
W. Smith & Son	14,218 0 0
G. Munday & Sons	14,182 0 0
L. & H. R. Roberts	14,149 0 0
Treasure & Son	13,945 0 0
J. Smith & Sons, Ltd.	13,945 0 0
E. Lawrance & Sons	13,888 0 0
J. Parsons	13,769 0 0
J. Garrett & Son	13,691 0 0
W. Johnson & Co., Ltd.	13,682 0 0
Leslie & Co., Ltd.	13,617 0 0
J. & M. Patrick	13,589 0 0
F. & E. Davey, Ltd.	13,377 5 10
S. N. Soole & Son	13,230 6 0
Galbraith Bros.	13,000 0 0
Holliday & Greenwood, Ltd., Brixton‡	12,929 0 0

‡ Recommended for acceptance.

[The estimate of the Architect (Education), comparable with the tenders, is £13,807.]

LONDON.—For iron buildings, Ben Jonson-road, Stepney, for the London County Council :—

F. Smith & Co., Ltd.	£1,998
Croggon & Co., Ltd.	1,750
T. Cruwys	1,700
Alnwick Foundry & Engineering Co., Ltd.	1,700
Humphreys, Ltd.	1,437
T. J. Hawkins & Co.	1,420
J. McManus	1,350
W. Harbrow, Iron Buildings Works, South Bermondsey*	1,269

LONDON. — For iron buildings Cambourn-road, Wandsworth, for the London County Council :—

F. Smith & Co., Ltd.	£1,853	J. McManus	£1,440
T. J. Hawkins & Co.	1,700	W. Harbrow, Iron Buildings Works, South Bermondsey*	1,420
T. Cruwys	1,650		
Humphreys, Ltd.	1,617		
Alnwick Foundry & Engineering Co., Ltd.	1,450		

§LONDON.—For middle-level sewer No. 2, Section B, construction between Queen's-road, Shoreditch, and Formosa-street, Paddington, for the London County Council :—

G. P. Trentham	£521,169 12 10
Perry & Co.	312,167 0 0
E. Bentley & Son	240,518 12 10
S. Pearson & Son, Ltd.	239,041 11 8
W. Manders	237,566 3 1
W. Scott & Middleton, Ltd.	231,935 1 9
W. Kennedy, Ltd.	229,675 2 1
Muirhead & Co.	219,549 10 7
R. H. B. Neal, Ltd.	217,063 11 10
Works Committee's estimate	213,268 17 0
D. R. Paterson, Ltd.	210,589 3 4
Westminster Construction Co., Ltd.	203,417 1 2
Kelletts, Ltd.	199,898 7 2½
G. Hay & Co.	181,468 14 10
J. Moran & Son, Ltd., Westminster† ‡	172,015 11 11

[The Chief Engineer's estimate, comparable with the tenders, is £215,000. Kelletts, Ltd., submitted an alternative tender of £188,400 if they were allowed to adopt a special method of tunnelling. Should the necessary powers be obtained in the present session of Parliament to enable the Council to receive the sewage and drainage of the Brent area of the Parish of Willesden into the metropolitan main drainage system, the new middle-level sewer will have to be extended from Paddington to the western boundary of the county. It is provided that the cost of this section of the sewer shall be paid by the Willesden Urban District Council. Should the Council, however, decide to connect any London sewers therewith, it will pay a proportionate part of the cost of construction.]

‡ Messrs. J. Moran & Son, Ltd., to sub-let to J. Gibb & Co. the manufacture of the iron work required for the work.

LONDON.—Reconstruction of Caledonian-road and Seven Sisters-road tramways (laying of cable-ducts, etc.), for the London County Council :—

J. A. Ewart	£4,811 3 10
Fry Bros.	4,741 15 3
Reid Bros.	4,539 7 0
Callender's Cable & Construction Co., Ltd.	4,200 11 3
Greig & Matthews	4,196 19 5
J. Mowlem & Co., Ltd.	4,069 4 5
Westminster Construction Co., Ltd.	3,881 10 0
D. R. Pateson, Ltd.	3,804 8 11
W. Muirhead & Co.	3,748 4 1
C. Ford	3,734 14 10
Dick, Kerr, & Co., Ltd., Cannon-street, E.C.*	3,375 17 8

§ The report of the Main Drainage Committee of the London County Council containing this list of tenders was withdrawn at the meeting of the Council on Tuesday.

LONDON.—For the erection, alteration, and additions to the police station, at Brixton. Mr. J. Dixon Butler, F.R.I.B.A., Surveyor to the Metropolitan Police, New Scotland Yard. Quantities by Messrs. Thurgood Son & Chidgey, 8, Adelphi-terrace, Strand :—

Lovatt Ltd....	£8,290 5 3	Willmott &Sons	£7,775 0 0
Mowlem & Co., Ltd.....	8,200 0 0	Prestige & Co., Ltd.....	7,725 0 0
Ashby & Horner	8,131 0 0	Lorden & Son..	7,693 0 0
C. Ansell.....	8,080 0 0	Higgs & Hill,Ltd.	7,684 0 0
Lathey Bros..	7,987 0 0	W. Eyre	7,511 5 6
Leslie & Co....	7,952 0 0	Patman&Fotheringham	7,423 0 0
Holloway Bros.	7,898 0 0	F.& H. F. Higgs	7,280 0 0
Appleby & Sons	7,820 0 0		

LONDON.—For out patient, casualty, and bathing departments, King's College Hospital, Denmark Hill. Mr. William A. Pite, F.R.I.B.A. architect. Quantities by Messrs. Fowler & Hugman :—

T. Rider & Son ..	£73,870	Perry & Co.....	£69,784
E. Lawrance&Sons	73,798	Holloway Bros., Ltd.	69,400
Colls & Son	73,333	J. Carmichael	68,828
Holland & Hannen	72,888	Dove Bros., Ltd...	67,375
Leslie & Co., Ltd.	72,000	Foster & Dicksee	
Holliday & Greenwood, Ltd.....	69,949	Ltd.*.....	65,658
	Sanitary work.		
Shanks, Ltd‡.....	£4,118	J. Reekie & Sons ..	£4,392
G. Jennings, Ltd. ..	5,500	Doulton & Co., Ltd.	4,300
R. A. Marshall	5,428	Dent & Hellyer....	4,249
NorthBritishPlumbing Co., Ltd.	4,888	Davis, Bennett, & Co.	3,980
M. Hall & Co.....	4,451		

‡ Incomplete.

MAYFIELD.—For construction of sewerage and sewage disposal works, for the Rural District Council of Uckfield. Mr. J. Taylor, Surveyor, Henley House, Uckfield :—

Hutchinson & Co., St. Leonards-on-Sea* £1,697 15

NORTH PICKENHAM.—For alterations and additions to schools. Mr. Herbert J. Green, Architect and Diocesan Surveyor, 31, Castle Meadow, Norwich :—

J. E. Smith ..	£500 0 0	G. Jeffries	£429 15 0
A. E. Harvey..	435 0 0	R. Shanks, Chatteris† ..	398 0 0

NORTHWICH.—For a covered brick and concrete tank and for other work (Sandiway waterworks), for the Rural District Council. Mr. W. M. Beckett, engineer, Temple-chambers, 33, Brazennose-street, Manchester :—

S. Hutton & Co., Paradise-street, Northwich* £674 9 3

NORTHWICH.—For 21 tons of cast-iron pipes and specials for Sandiway waterworks, for the Rural District Council. Mr. W. M. Beckett, engineer, 33, Brazennose-street, Manchester :—

Stanton Ironworks Co., Ltd., near Nottingham* £122 12 7

ROCK FERRY.—For erecting the south "Carnegie" Free Library, Grove-road, for the Birkenhead Library Committee. Mr. J. R. Mewton, architect, 45, Hamilton-square, Birkenhead :—

J. Merritt.....	£2,650 0	J. Thomas	£2,200 0
W. H. Forde ..	2,603 0	G. Snape	2,195 0
J. Henshaw	2,550 0	G. Parker.....	2,175 0
Morrison & Sons	2,400 0	F. W. Mayor ..	2,159 0
G. Elldige.....	2,390 0	J. Gabbut.....	2,145 0
R. Allen	2,385 0	W. Hall & Sons	2,143 0
P. Rothwell	2,350 0	G. L. Desoer....	2,123 0
T. Spencer	2,350 0	Hughes& Stirling	1,992 13
Kirkup & Gaskell	2,300 0	A. Lloyd, 46, Mandeville-st.,	
Paterson	2,298 0	Walton*	1,850 0
G. Woods.....	2,282 0		

SEAFORD (Sussex).—For erecting first portion of Baptist Chapel, Broad-street. Messrs. Smee & Houchin, architects, 85, Fleet-street, E.C. :—

C. Morling	£1,378	W. Wilkinson*	£1,289 17 6
Godfrey Bros.	1,331		

TREFOREST.—For the installation of a low pressure hot-water heating system in the Park School, for the Pontypridd Education Committee :—

T. T. Smith, Wembly £362 12

WESTON-SUPER-MARE. — For erecting a new masonic hall at the rear of the Victoria Hall. Messrs. Hans Price and W. Jane and S. J. Wilde & Foy, joint architects, Weston-super-Mare :—

F. Merrick & Son	£2,355 0	C. & E. Stradling	£1,789 0
Wilkins & Son ..	2,118 0	T. Cox	1,759 0
E. Preece	1,960 0	White & Co.....	1,704 17
G. Pollard, Ltd..	1,950 0	Fear & Son	1,699 4
W. Dubin	1,870 0	H. W. Pollard, Bridgwater ..	1,660 0*
H. A. Forse	1,869 0		
C. Addicott	1,850 0		

*Reduced to £1,504 0 0

WILMCOTE.—For erecting four villa-residences for Mr. W. M. Pitcher, Tiddington, near Stratford-on-Avon. Messrs. Knight and Hebery, architects, Stratford-on Avon. Quantities by architects :—

G. F. Smith & Sons	£1,400 0 0
J. G. Fincher & Co	1,390 0 0
C. G. Hinns & Sons	1,156 0 0
F. G. Watson.....	1,129 0 0
J. Roberts.....	1,103 0 0
J. Cox.....	1,100 0 0
J. Harris & Sons	1,100 0 0
E. J. Watson & Co.	1,100 0 0
W. Withers	1,056 3 0
Exors. J. Stanley.....	1,033 15 8
W. Bailey	894 3 0
E. J. Lea, Stratford-on-Avon*	890 0 0

WING.—For water supply works, for the Rural District Council. Messrs. Sands & Walker, engineers, Milton-chambers, Nottingham :—

W. I. Knox ..	£5,422 16 0	R. C. Crawford	£3,600 0 0
T. W. Pedrette	4,956 0 0	C.Chamberlain	3,552 2 0
F. Mitchell & Son.....	4,500 9 6	J. W. Dean, Ltd.	3,550 0 0
R. W. Blackwell & Co...	4,500 0 0	Lock.Andrews, & Price	3,532 14 0
J. Moran & Son, Ltd. ..	4,401 3 8	H. H. Barry..	3,498 0 0
R. M. Parkinson.....	4,400 0 0	H. E. Buckley	3,401 5 1
A. E. Nunn ..	4,281 14 9	Rowell & Sons	3,304 18 7
T. Wood & Sons	4,019 0 0	G. Powdrill ..	3,300 0 0
W. Green & Co.	3 987 0 0	Lane Bros. ..	3,283 10 0
Johnson Bros.	3,925 0 0	T. Yirrell, Leighton Buzzard* ..	3,247 0 0
W. G. Wilmott	3,769 0 0	Edwards & Co.	3,236 0 7
C. Ford.....	3,697 0 0	H. Brown	3,184 0 0

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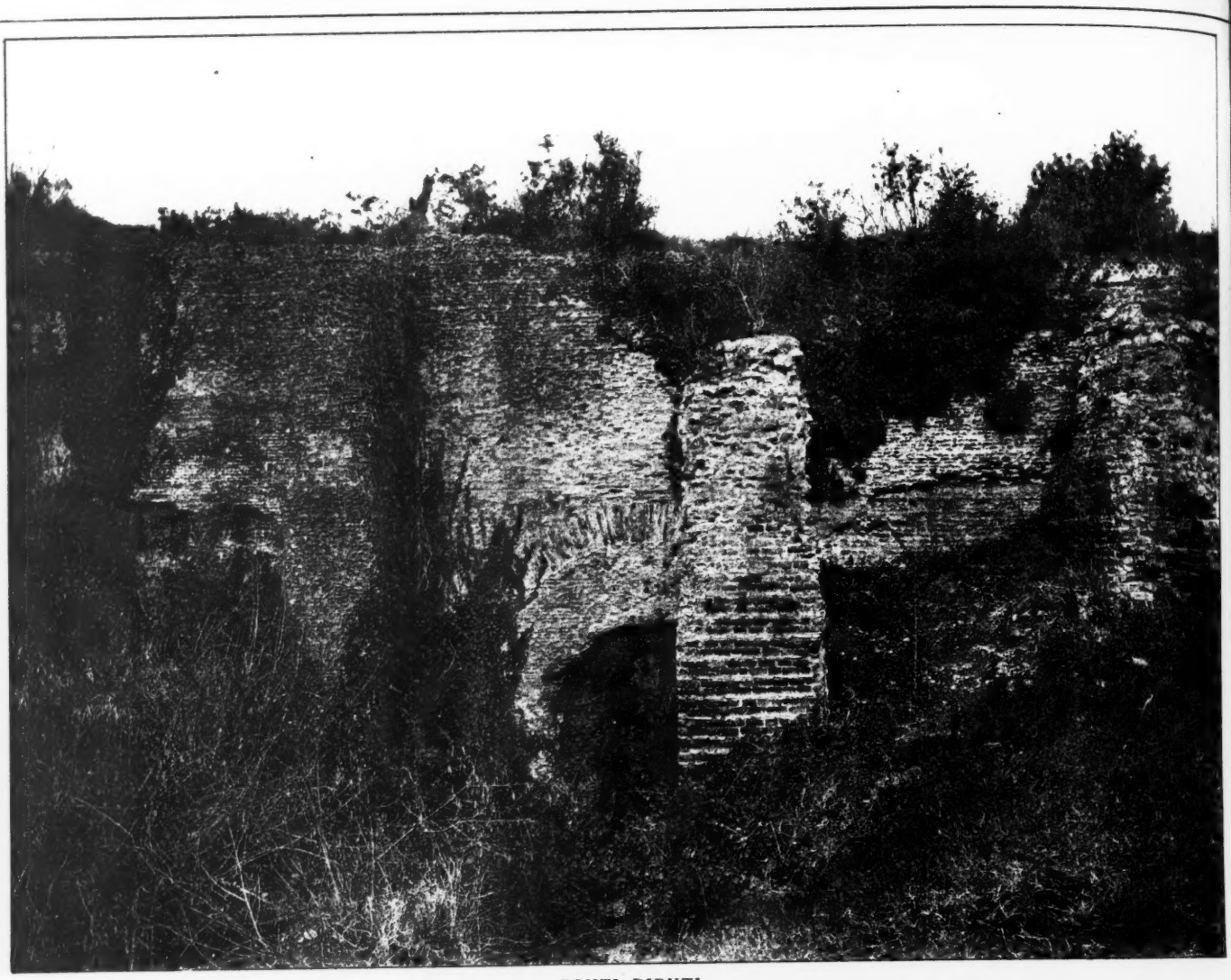

Fig. 17. PONTI DIRUTI.

Fig. 19 FOSSO DI BISERANO.

Fig. 18. PONTI DIRUTI.

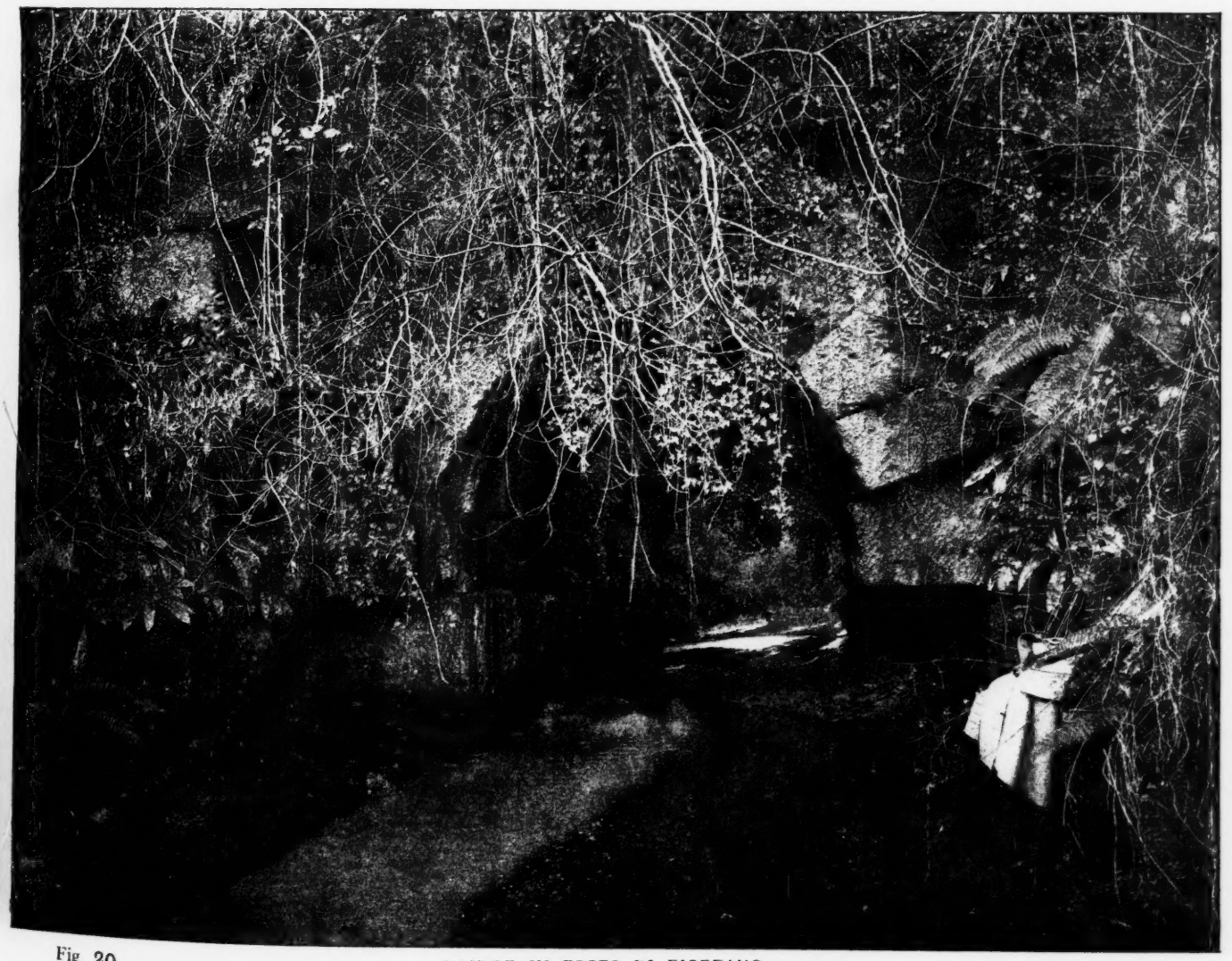

Fig. 20. BRIDGE IN FOSSO DI BISERANO.

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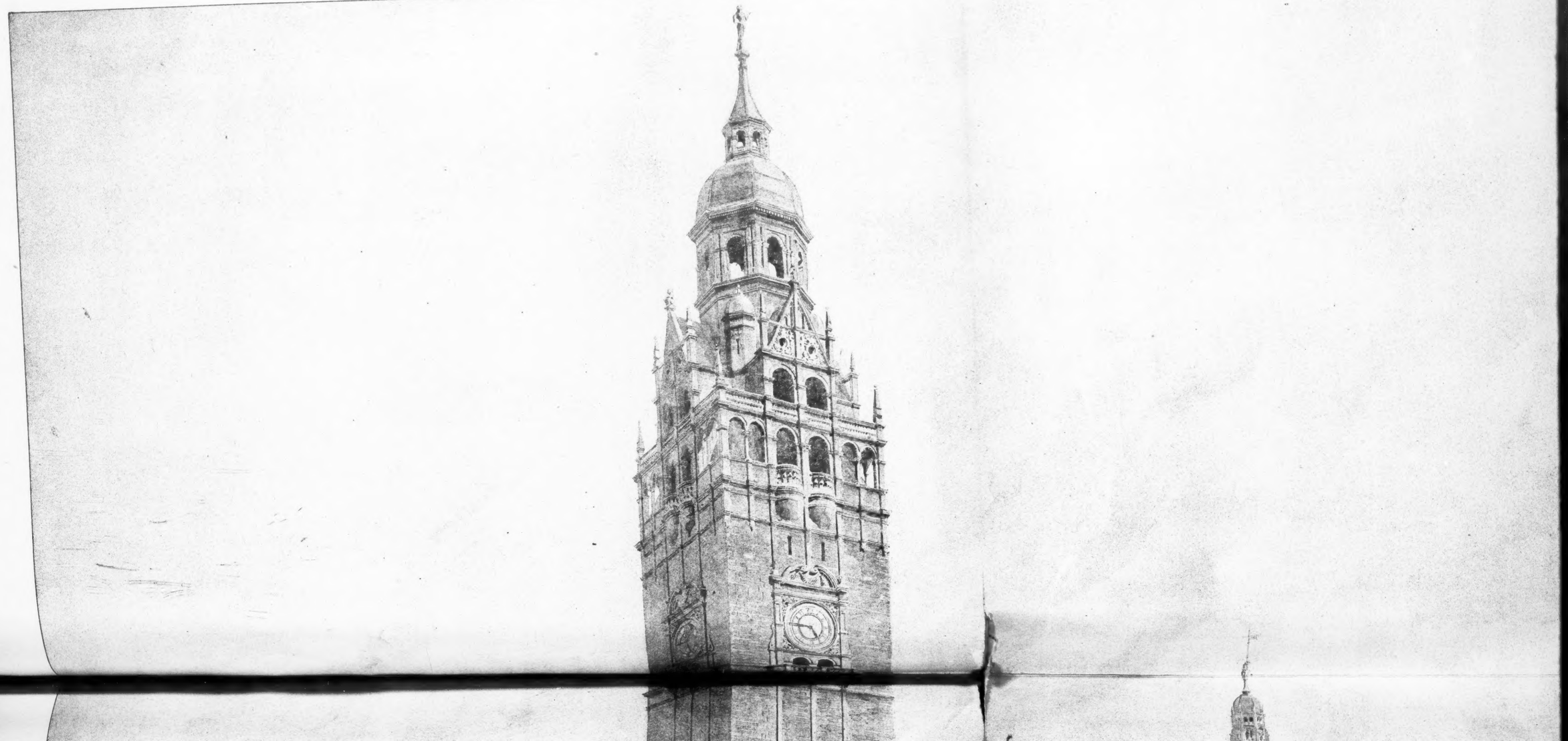
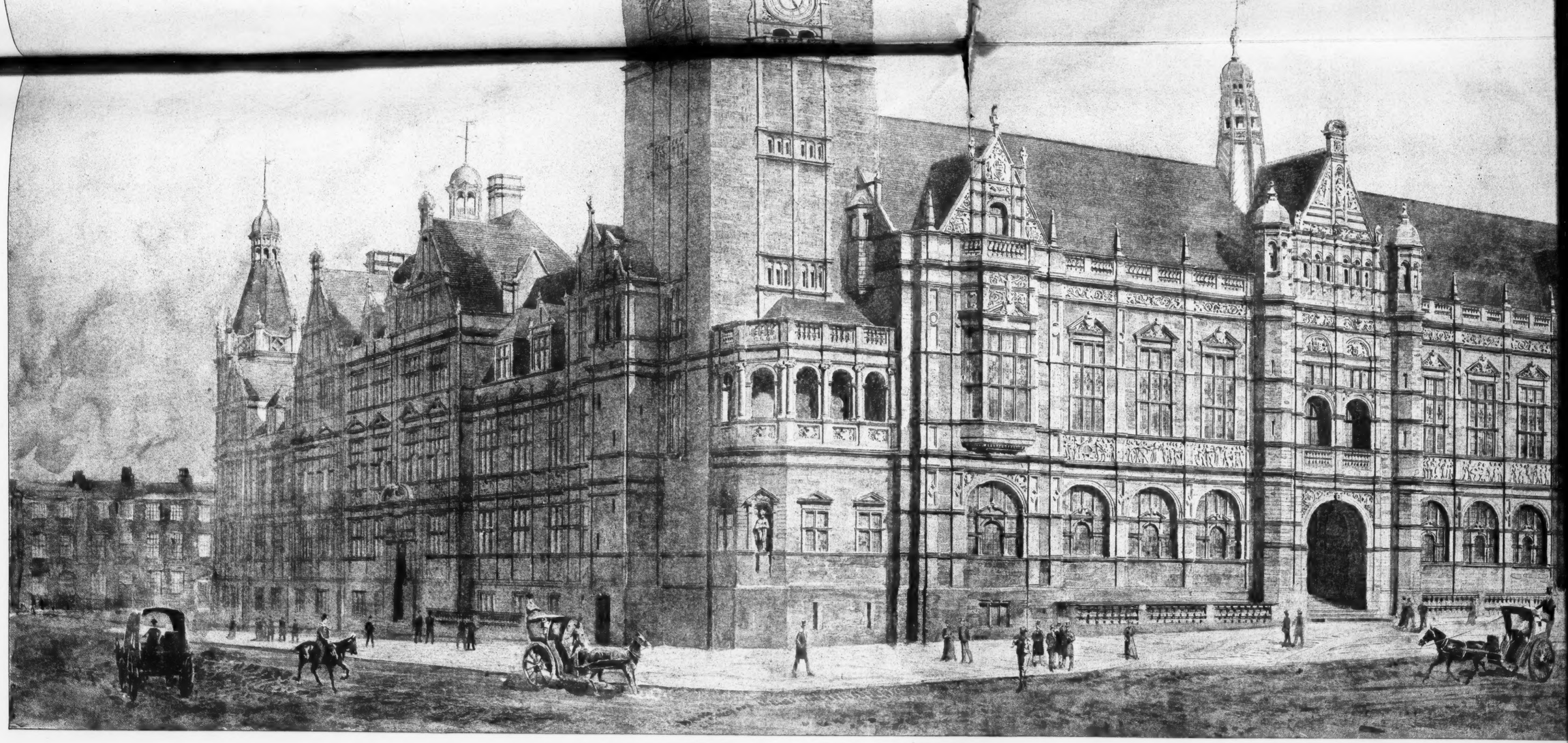
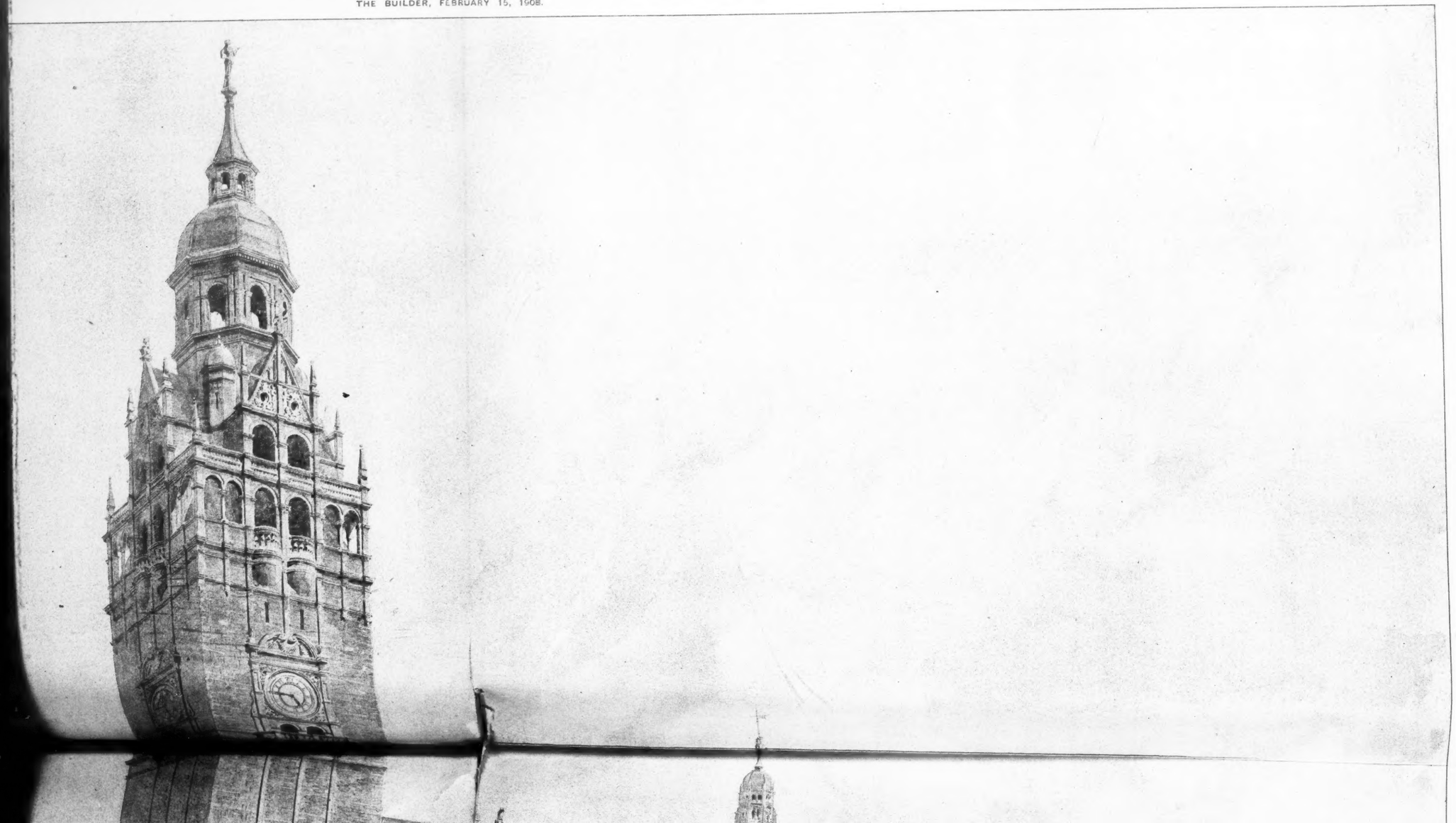
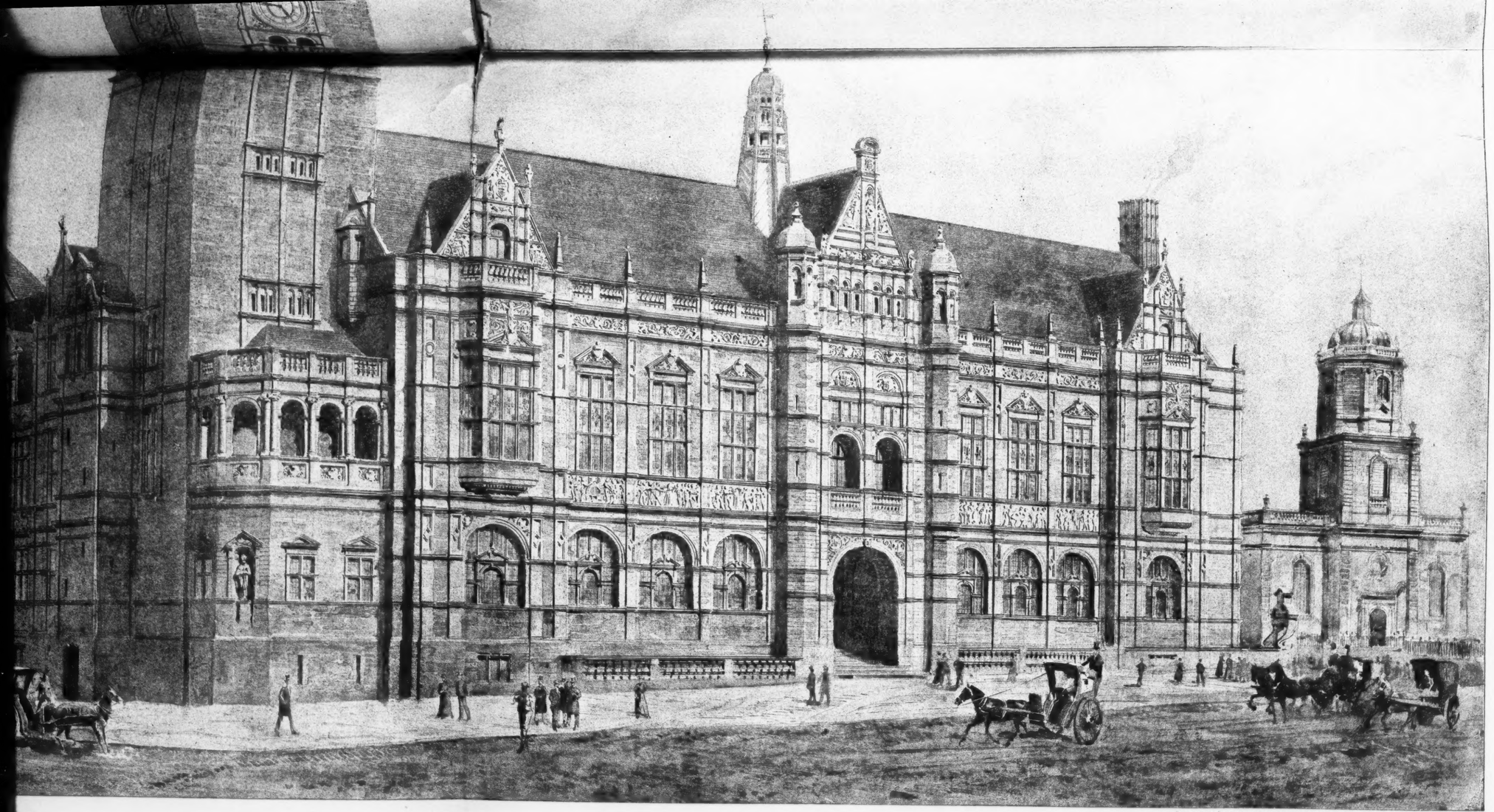




SHEFFIELD MUNICIPAL BUILDINGS: PRINCIPAL FRONT.—The late E. W. Mountford, F.R.I.B.A., Architect





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SHEFFIELD MUNICIPAL BUILDINGS: PRINCIPAL FRONT.—The late E. W. Mountford, F.R.I.B.A., Architect

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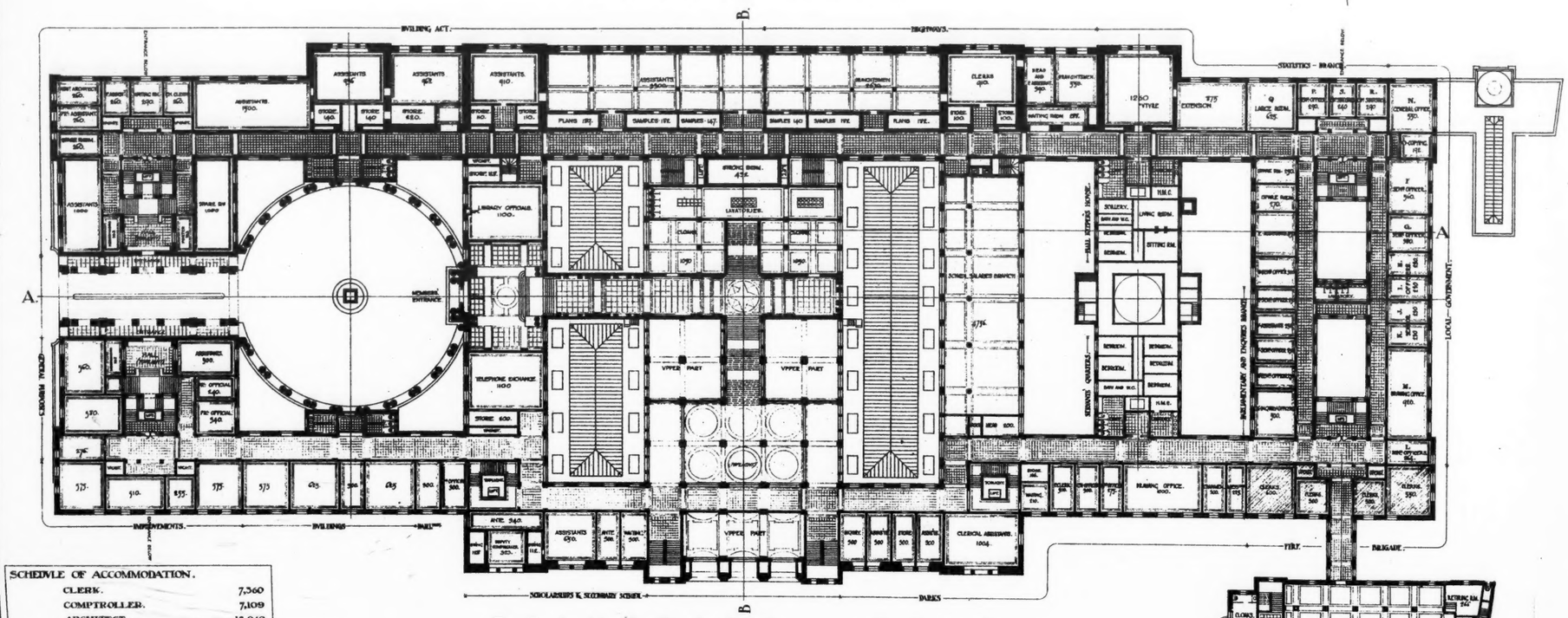

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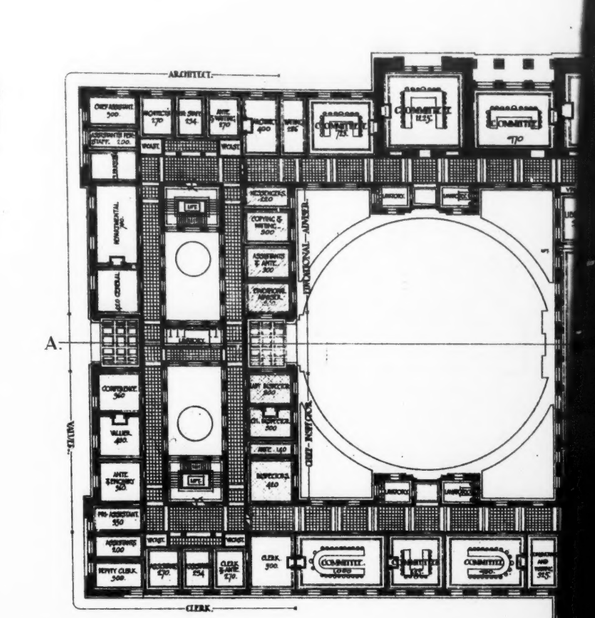
COMPTROLLER.	7,109
ARCHITECT.	18,940
LOCAL GOVERNMENT.	7,481
Do Do (FUTURE EXTENSION)	2,635
PARKS.	4,940
FIRE BRIGADE.	1,730
RESIDENTIAL QUARTERS	2,480
LIBRARY OFFICIALS	1,228
TELEPHONE	1,300

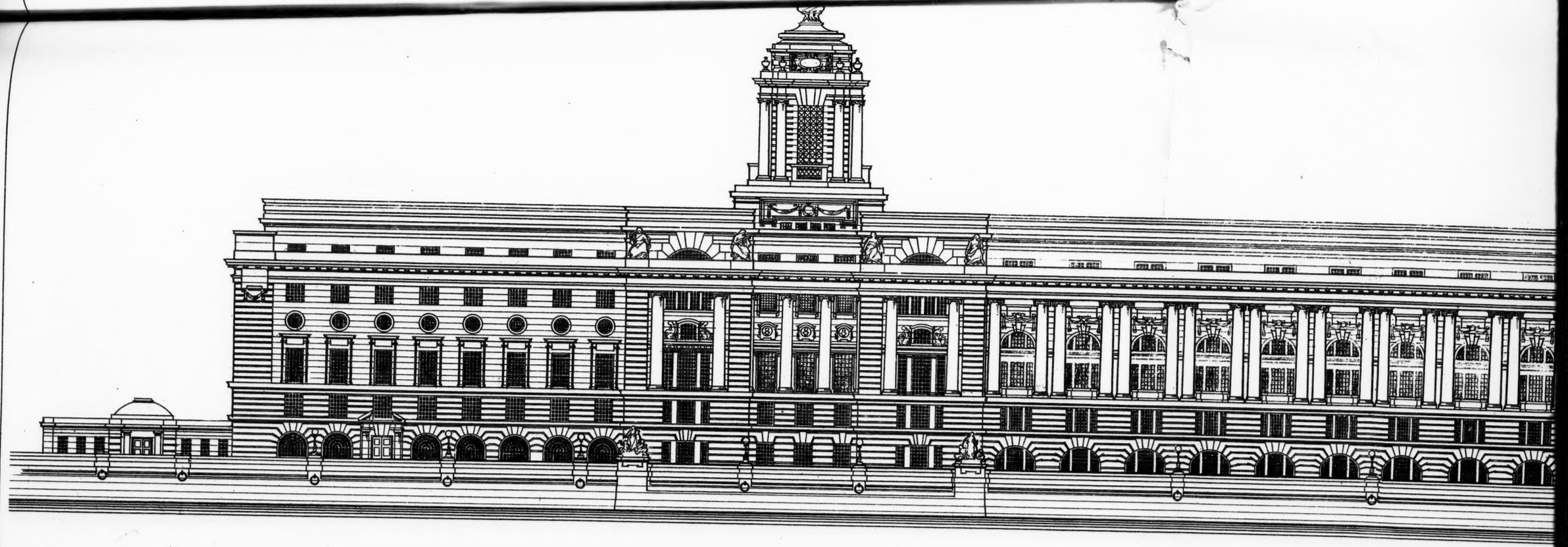


SCHEDULE OF ACCOMMODATION.

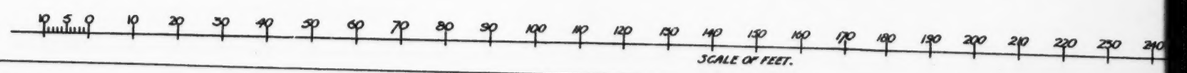
CLERK OF THE COUNCIL	1,774	COUNCIL CHAMBER	3,896
COMPTROLLER	1,470	COMMITTEE ROOMS	11,290
ENGINEER	1,174	MEMBERS' ROOMS	13,784
ARCHITECT	3,080	CHAIRMAN ETC'	2,420
SOLICITOR	1,530	LIBRARY	2,602
MEDICAL OFFICER	1,380	WAITING ROOMS	2,071
VALUER	1,470		
STATISTICAL OFFICER	1,400		
FIRE BRIGADE	856		
WORKS	786		
TRAMWAYS	1,380		
EDUCATIONAL ADVISOR	1,120		
EXECUTIVE OFFICER	1,380		
CHIEF INSPECTOR	1,160		

RESIDENTIAL QUARTERS	1,928
LIBRARY OFFICIALS	1,500
TELEPHONE	1,500

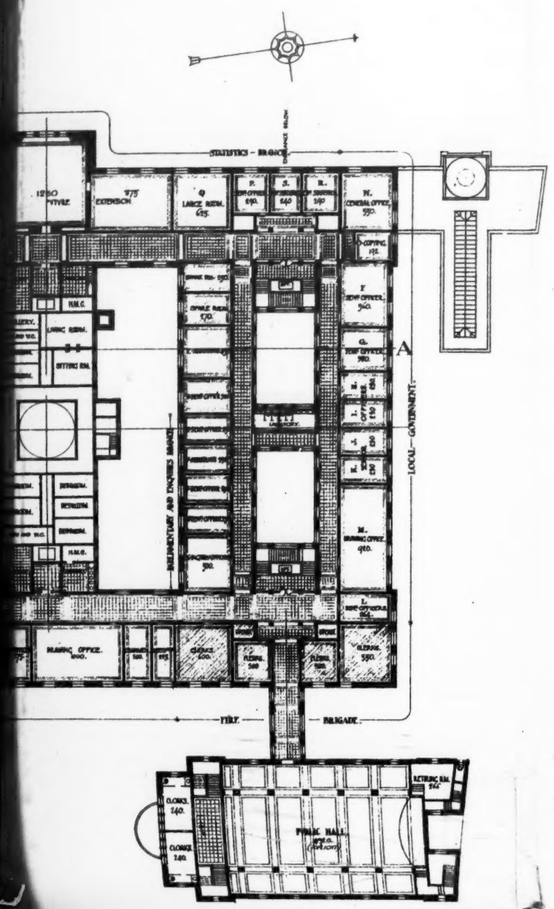
EXECUTIVE OFFICES	
CHIEF INSPECTOR	1,160

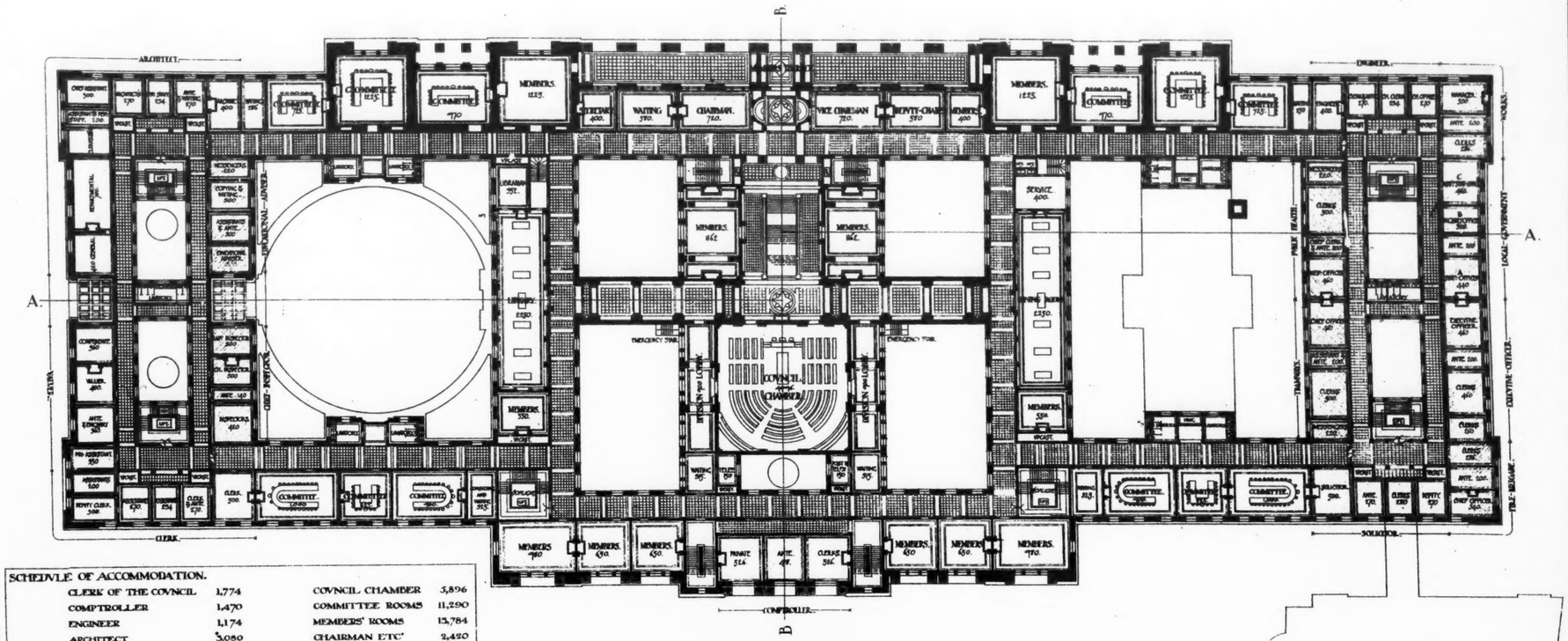


ELEVATION TO RIVER THAMES.



LONDON COUNTY HALL COMPETITION.—Design by Mr. H. T. Hare, F.R.I.B.A.

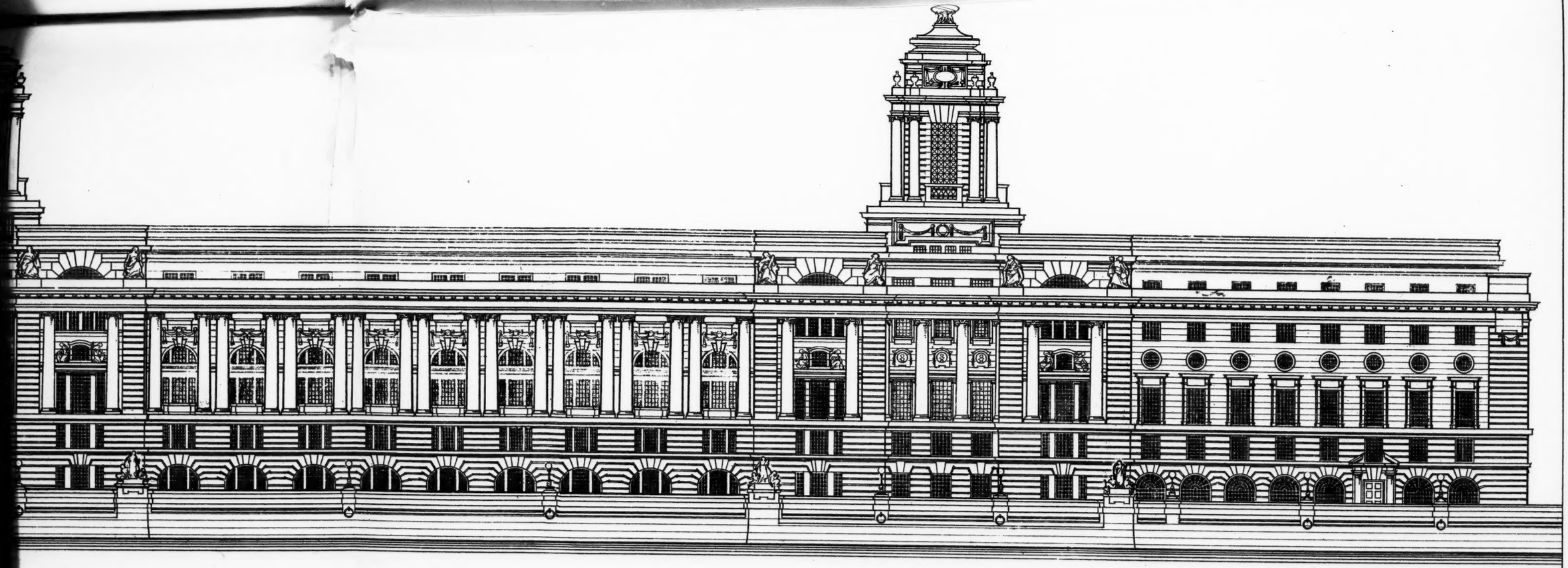




SCHEDULE OF ACCOMMODATION.			
CLERK OF THE COUNCIL	1,774	COUNCIL CHAMBER	5,896
COMPTROLLER	1,470	COMMITTEE ROOMS	11,290
ENGINEER	1,174	MEMBERS' ROOMS	13,784
ARCHITECT	3,080	CHAIRMAN ETC'	2,420
SOLICITOR	1,320	LIBRARY	2,602
MEDICAL OFFICER	1,580	WAITING ROOMS	2,071
VALUER	1,470		
STATISTICAL OFFICER	1,400		
FIRE BRIGADE	826		
WORKS	786		
TRAMWAYS	1,580		
EDUCATIONAL ADVISOR	1,120		
EXECUTIVE OFFICER	1,580		
CHIEF INSPECTOR	1,160		

FIRST FLOOR.

EDUCATIONAL ADVISOR	1,120
EXECUTIVE OFFICER	1,380
CHIEF INSPECTOR	1,160



ELEVATION TO RIVER THAMES.

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300.

SCALE OF FEET.

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